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UNLOCKING THE iPhone: HOW ANTITRUST LAW CAN SAVE CONSUMERS FROM THE INADEQUACIES OF COPYRIGHT LAW

Abstract: In 2007, George Hotz circumvented the software lock on his iPhone that prevented him from using the device on a wireless network other than AT&T's. When other iPhone purchasers similarly freed themselves from AT&T's service, Apple responded by using a software update to disable the altered iPhones. This back-and-forth between consumers and Apple raises two important questions: can consumers legally unlock their iPhones, and, if so, under what body of law? Although an exemption to the Digital Millennium Copyright Act (the "DMCA") appears to allow consumers to circumvent cell phone locks under copyright law, the regulation is of little practical use to consumers seeking to avoid AT&T's allegedly inferior service. Instead, they should challenge the underlying business arrangement between Apple and AT&T by arguing that tying the purchase of the iPhone to AT&T's service violates Section 1 of the Sherman Antitrust Act. This Note examines this argument and, in doing so, illuminates the limitations of the DMCA and demonstrates how it encourages content providers to engage in anticompetitive behavior.

INTRODUCTION

In June 2007, Apple revolutionized public perception of cellular telephones when it released the iPhone.¹ Much more than just a portable telephone, the iPhone allows users to play music and movies, store photos, and access the Internet, all through a colorful and convenient touch screen.² Unfortunately for consumers, however, use of their iPhones is conditioned on their acceptance of a two-year service agreement with wireless service provider AT&T.³ For many consumers,

¹ See Thomas Crampton, *Eating the iPhone*, N.Y. TIMES, June 29, 2007, at A28; Thomas Crampton, *Much Ado About Apple's iPhone*, N.Y. TIMES, May 21, 2007, at C6; Jeremy W. Peters, *Gave Up Sleep and Maybe a First-Born, but at Least I Have an iPhone*, N.Y. TIMES, June 30, 2007, at C3.

² See Apple iPhone Features, <http://www.apple.com/iphone/features/index.html#phone> (last visited Mar. 25, 2008).

³ iPhone Terms and Conditions, <http://www.wireless.att.com/learn/articles-resources/iphone-terms.jsp> (last visited Jan. 2, 2008). Unlike purchasers of the original iPhone, purchasers of Apple's 3G iPhone, released on July 11, 2008, do not have to enter into mandatory

this forced marriage with AT&T is annoying and inconvenient; many complain that AT&T's service suffers from inadequate coverage and spotty reception.⁴ To protect its arrangement with AT&T and to ensure that iPhone purchasers do not use another service provider, however, Apple installed a technological device on all iPhones that "locks" the device into AT&T's network and blocks access to other networks.⁵

In August 2007, with the help of a soldering gun, some obscure software tools, and 500 hours of labor, seventeen-year-old George Hotz solved this problem by "unlocking" his iPhone, allowing him to access the network of one of AT&T's rival carriers, T-Mobile.⁶ In the wake of Hotz's accomplishment, software developers created and released user-friendly software programs to help others repeat Hotz's end-around and unlock their iPhones from AT&T's exclusive service.⁷

Unfortunately for consumers, iPhone unlocking did not go unnoticed by Apple.⁸ When asked by a journalist whether unlocking was a concern for his company, Apple CEO Steve Jobs answered, "[i]t's a constant cat and mouse game. We try to stay ahead. People will try to break in, and it's our job to stop them breaking in."⁹ Jobs stayed true to his

two-year service contracts with AT&T. Eric Benderoff, *AT&T's Odd iPhone Offer*, TECHNEWS-WORLD, July 6, 2008, <http://www.technewsworld.com/story/iphone/63683.html?welcome=1216001752>. Instead, they can pay a \$400 premium for a contract-free iPhone and then pay AT&T on a monthly basis. *Id.* Under this plan, users still cannot access a network other than AT&T's. *Id.*

⁴ See Michelle Quinn, *Shine Off Apple for Some Loyalists*, CHI. TRIB., Oct. 14, 2007, § 5, at 3; Adam Silverman, *Lure of iPhone Proves Too Strong for Some in Vermont*, USA TODAY, Aug. 28, 2007, at 4B. Prior to the iPhone's release, one customer claimed, "The ONLY thing halting my purchase of an iPhone is AT&T's slow, last-generation wireless service [The] iPhone gets a 10+, AT&T a 2 (maybe)." Leslie Brooks Suzukamo, *High Stakes for AT&T*, ST. PAUL PIONEER PRESS (Minn.), June 23, 2007, at 1C.

⁵ See Cyrus Farivar, *Locked vs. Unlocked: Opening Up Choice*, N.Y. TIMES, Nov. 1, 2007, at C9; Jennifer Granick, *Legal or Not, iPhone Hacks Might Spur Revolution*, WIRED, Aug. 28, 2007, http://www.wired.com/politics/onlinerights/commentary/circuitcourt/2007/08/circuitcourt_0829; Tim Wu, *The iPhone Freedom Fighters*, SLATE, Oct. 4, 2007, http://www.slate.com/id/2175304/pagenum/all/#page_start.

⁶ Brad Stone, *With Software and Soldering, AT&T's Lock on iPhone is Undone*, N.Y. TIMES, Aug. 25, 2007, at C1.

⁷ *Id.*

⁸ See, e.g., Jacqui Cheng, *Apple's Fight Against iPhone Unlocks May Result in Expensive Bricks*, ARS TECHNICA, Sept. 19, 2007, <http://arstechnica.com/news.ars/post/20070919-apples-fight-against-iphone-unlocks-may-result-in-expensive-bricks.htm>; Gregg Keizer, *Update: Apple Plays Hardball: Upgrade 'Bricks' Unlocked iPhones*, COMPUTERWORLD, Sept. 27, 2007, <http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9039479> [hereinafter Keizer, *Apple Plays Hardball*].

⁹ Cheng, *supra* note 8; Gregg Keizer, *Jobs Says Apple Will Fight iPhone Unlocking Hacks*, COMPUTERWORLD, Sept. 18, 2007, http://www.computerworld.com/action/article.do?command=viewArticleBasic&articleId=9037398&intsrc=hm_list.

word, eventually implementing a software update that disabled any third-party software installed on a user's iPhone and that even rendered some unlocked iPhones unusable.¹⁰ Software developers countered by vowing to combat Apple's update with new unlocking software.¹¹

In October 2007, iPhone purchasers sought recourse from the legal system by filing two class action lawsuits against Apple and AT&T, one in federal court and one in state court.¹² The suits claim that Apple and AT&T are violating state and federal antitrust laws by barring access to alternate wireless networks and interfering with the rights of consumers to use freely and lawfully the product that they purchased.¹³ Each suit seeks monetary damages exceeding \$200 million, as well as injunctions that would give iPhone purchasers the freedom to use their devices with the wireless network of their choice.¹⁴

¹⁰ Cheng, *supra* note 8. In addition to using software updates, Apple has also attempted to curb unlocking (and the apparent reselling) of its iPhone by refusing to accept cash for the product and only allowing each customer to purchase a maximum of two iPhones. See *Apple Limits Sale of iPhones: Two Per Person and No Cash*, N.Y. TIMES, Oct. 27, 2007, at C2.

¹¹ Gregg Keizer, *iPhone Unlock Hackers Promise to Fight Apple Updates*, COMPUTERWORLD, Sept. 25, 2007, <http://www.computerworld.com/action/article.do?command=viewArticleBaic&articleId=9038898> [hereinafter Keizer, *iPhone Unlock Hackers*].

¹² See generally Complaint, *Holman v. Apple, Inc.*, No. C07-05152 (N.D. Cal. Oct. 5, 2007) [hereinafter *Holman* Complaint]; Complaint, *Smith v. Apple, Inc.*, No. 1-07-CV-095781 (Cal. Super. Ct. Oct. 5, 2007) [hereinafter *Smith* Complaint]. Apple has also been challenged in court for another allegedly unlawful tying arrangement related to its digital rights management technology. See generally Complaint, *Tucker v. Apple Computer, Inc.*, No. C-06-4457 (N.D. Cal. Jul. 21, 2006); Nicola F. Sharpe & Olufunmilayo B. Arewa, *Is Apple Playing Fair? Navigating the iPod FairPlay DRM Controversy*, 5 NW. J. TECH. & INTEL. PROP. 332 (2007). Through its iTunes Music Store ("iTMS"), Apple sells downloadable songs that have technological restrictions to prevent unauthorized copying. Sharpe & Arewa, *supra*, at 333. This technology, called FairPlay, aims to protect the copyrighted works by preventing consumers from loading iTMS songs onto portable digital music players other than the iPod. *Id.* Consequently, some have accused Apple of tying the purchase of iTunes songs with the purchase of the iPod. See *id.*

¹³ See *Holman* Complaint, *supra* note 12, ¶ 1, at 1; *Smith* Complaint, *supra* note 12, ¶ 1, at 5. Specifically, both lawsuits allege that Apple and AT&T have violated portions of the Sherman Antitrust Act, as well as the Cartwright Act, California's state law counterpart to the federal antitrust statute. See *Holman* Complaint, *supra* note 12, ¶¶ 76-97, at 17-22; *Smith* Complaint, *supra* note 12, ¶¶ 117-135, at 39-41. The plaintiffs in *Holman* and *Smith* have recently agreed to consolidate their cases in the U.S. District Court for the Northern District of California. See generally Joint Case Management Statement, *In re Apple & AT&T Antitrust Litig.*, No. 07-cv-5152-JW (N.D. Cal. Jan. 18, 2008).

¹⁴ See *Holman* Complaint, *supra* note 12, ¶ 1, at 1; *Smith* Complaint, *supra* note 12, ¶¶ 1-2, at 5. For each of the five counts waged against Apple and AT&T, the *Holman* Complaint asks for at least \$200 million. See *Holman* Complaint, *supra* note 12, ¶¶ 85, 93, 97, 102, at 19-23. The *Smith* Complaint asks for damages in the range of \$280 million to \$7.52 billion. See *Smith* Complaint, *supra* note 12, ¶ 6 at 53. Both complaints seek to enjoin Apple

This Note evaluates the legal arguments available to consumers who would like to purchase the iPhone without being locked into AT&T's service.¹⁵ To provide background for this claim, Part I of this Note provides a brief overview of the cell phone industry, describes the practice of cell phone locking, and examines the iPhone and the Apple-AT&T relationship.¹⁶ Part II discusses the Digital Millennium Copyright Act (the "DMCA"), which prohibits the circumvention of technological protection measures that control access to copyrighted material, and examines whether unlocking the iPhone violates the DMCA.¹⁷ Part III discusses the prohibition of certain "tying" arrangements and the elements a plaintiff must prove to succeed in a claim under Section 1 of the Sherman Antitrust Act.¹⁸ Part IV examines whether an exemption to the DMCA allows consumers to unlock the iPhone.¹⁹ Finally, Part V argues that a better argument for consumers is that Apple and AT&T have imposed an illegal tying arrangement.²⁰

from selling the iPhone with any software lock. See *Holman Complaint*, *supra* note 12, ¶ 6, at 23–24; *Smith Complaint*, *supra* note 12, ¶ 10, at 53.

¹⁵ See *infra* notes 214–307 and accompanying text.

¹⁶ See *infra* notes 21–79 and accompanying text.

¹⁷ See *infra* notes 80–144 and accompanying text. Two recent articles on the Apple-AT&T relationship focus on the unlocking of the iPhone in the context of accessing the digital media stored on the device. See generally Neil Weinstock Netanel, *Temptations of the Walled Garden: Digital Rights Management and Mobile Phone Carriers*, 6 J. ON TELECOMM. & HIGH TECH. L. 77 (2007) (examining cellular carriers' involvement in using digital rights management to lock in consumers to ancillary products and services in ways that might undermine the DMCA's policies); Patrick J. Cleary, Note, *The Apple Cat and the Fanboy Mouse: Unlocking the Apple iPhone*, 9 N.C. J. L. & TECH. 295 (2008) (arguing that unlocking the iPhone to access alternate wireless carriers does not violate the DMCA).

¹⁸ See *infra* notes 145–250 and accompanying text. Section 1 of the Sherman Act prohibits "[e]very contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce." 15 U.S.C. § 1 (2006). The U.S. Supreme Court has interpreted this statute to prohibit certain tying arrangements, which the Court has defined as an agreement by a party to sell a product (the tying product) only on the condition that the buyer also purchase a different (or tied) product, or at least agree not to purchase that product from any other supplier. *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 461 (1992); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

¹⁹ See *infra* notes 215–251 and accompanying text.

²⁰ See *infra* notes 252–322 and accompanying text. There are two other areas of law not addressed in this Note—contracts and consumer protection—that could also provide legal remedies to iPhone purchasers seeking to access alternate wireless carriers. See Granick, *supra* note 5. A number of commentators, for example, have examined the extent to which individuals can contract around the limitations defined by intellectual property law, an issue particularly relevant in the digital age, when consumers purchase bundles of licenses embodied in physical products, rather than more traditional, tangible products. See generally Viva R. Moffat, *Super-Copyright: Contracts, Preemption, and the Structure of Copyright Policy Making*, 41 U.C. DAVIS L. REV. 45 (2007) (arguing that copyright law should preempt adhesion contracts in clickwrap or browsewrap form when they impose non-negotiated re-

I. AN OVERVIEW OF INDUSTRY PRACTICES AND THE IPHONE

A. *The History and Structure of the Cell Phone Industry and the Practice of Locking Cell Phones*

To understand why cell phones are locked into certain wireless networks, it is important to understand the basic technologies used in cell phones.²¹ When a caller uses a cell phone to make a call, the phone transmits a signal using radio frequency channels.²² The call is transmitted to a cell tower, which receives the transmission from the phone and then sends it to another cell phone or to a land line via a mobile telephone switching office.²³ The Federal Communications Commission (the "FCC") allocates certain radio frequencies to wireless service carriers, which then allow consumers to access their networks using approved cell phones.²⁴ Currently, there are two main mobile networks in the United States, GSM and CDMA.²⁵ T-Mobile and AT&T use the GSM network; Sprint and Verizon Wireless use the CDMA network.²⁶

strictions on fair use); Kathleen K. Olson, *Preserving the Copyright Balance: Statutory and Constitutional Preemption of Contract-Based Claims*, 11 COMM. L. & POL'Y 83 (2006) (arguing that the Supremacy Clause of the Constitution should replace § 301 of the Copyright Act when determining whether copyright law preempts contract law); Daniel E. Wanat, *Copyright Law, Contract Law, and Preemption Under § 301(a) of the Copyright Act of 1976: A Study in Judicial Labeling or Mislabeling and a Proposed Alternative*, 31 VT. L. REV. 707 (2007) (arguing that courts should adopt a policy-based approach when examining whether copyright law preempts private contracts).

Commentators have also examined whether consumer protection laws can prohibit sellers from using abusive business practices that interfere with consumers' ability to make use of the products they purchase. See generally David Bach, *The Double Punch of Law and Technology: Fighting Music Piracy or Remaking Copyright in a Digital Age*, 6 BUS. & POL. 1 (2004) (arguing that the use of legal and electronic measures to protect digital content is not a defense strategy against piracy, but rather an attempt to fundamentally alter the producer-consumer relationship, giving producers the upper hand); Niva Elkin-Koren, *Making Room for Consumers Under the DMCA*, 22 BERKELEY TECH. L.J. 1119 (2007) (arguing that consumer protection laws cannot fully address the threats to the interests of information consumers because of the use of digital rights management, and that the interests of consumers should be an integral part of copyright law analysis).

²¹ See Tim Wu, *Wireless Carterfone*, 1 INT'L J. COMM. 389, 395 (2007) ("Why can't you just buy a cell phone and use it on any network, like a normal phone?").

²² *Holman Complaint*, *supra* note 12, ¶ 21, at 4.

²³ *Id.*

²⁴ Comments of Jonathan R. Newman, Vice President, The Wireless Alliance LLC & Robert Pinkerton, to Library of Congress, Copyright Office, *In re Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies*, (2006), available at http://www.copyright.gov/1201/2006/comments/granick_wirelessalliance.pdf [hereinafter *Exemption Proposal*].

²⁵ See *In re Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d 403, 408 n.6 (S.D.N.Y. 2005). There are two other mobile networks, TDMA, now obsolete, and iDen, used by

Historically, wireless carriers have conditioned access to their networks on the purchase of approved cellular phones.²⁷ The carriers have justified this practice on two grounds.²⁸ First, providing an efficient and secure wireless network requires handsets to meet certain standards defined by the cellular service providers.²⁹ Second, the packaging of cell phone service and handsets allows the carriers to subsidize the production of handsets, making it more affordable for consumers to obtain wireless service.³⁰

As a result, consumers are not free to pick and choose the networks to which they connect once they have purchased a phone.³¹ For one thing, GSM-enabled phones are not compatible with CDMA-enabled phones, so even if consumers could escape one cellular carrier, they would only be able to access another carrier on the same network.³² Furthermore, wireless carriers prevent users from switching carriers either through contractual obligations, software locks, or both.³³ The software locks prevent the user from accessing copyrighted mobile firmware, which controls the "secret handshake" between the mobile handset and the wireless carrier.³⁴ Without access to such firmware, the cell phone can only access the network authorized by the cellular service provider.³⁵

The policy of locking consumers into cellular networks appears to be changing.³⁶ For example, in 2006, consumers filed a class action lawsuit against wireless carrier Sprint, accusing the company of anticompetitive practices relating to the software locks.³⁷ Sprint chose to settle the case and provided consumers with the codes necessary to unlock

Nextel. See *id.* The *Wireless Telephone Services Antitrust Litigation* refers to these networks as technologies; the Exemption Proposal refers to them as mobile networks. *Id.* at 408; Exemption Proposal, *supra* note 24, at 3. This Note will use the term "mobile networks."

²⁶ See *Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d at 408.

²⁷ Exemption Proposal, *supra* note 24, at 4; Fred Vogelstein, *Weapon of Mass Disruption*, WIRED, Feb. 2008, at 118, 122.

²⁸ See *Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d at 410; Robert W. Hahn et al., *The Economics of "Wireless Net Neutrality"*, 3 J. COMPETITION L. & ECON. 399, 418-22 (2007).

²⁹ Hahn et al., *supra* note 28, at 418-22.

³⁰ *Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d at 410.

³¹ Exemption Proposal, *supra* note 24, at 4.

³² See *id.* at 3.

³³ *Id.* at 4, 7.

³⁴ *Id.* at 4.

³⁵ See *id.*

³⁶ See Editorial, *A Cellular Sea Change*, N.Y. TIMES, Dec. 1, 2007, at A14; Carolyn Y. Johnson, *Big Wireless Carriers Get Set to Free the Phone*, BOSTON GLOBE, Mar. 28, 2008, at A1.

³⁷ Johnson, *supra* note 36.

their cell phones and gain access to other CDMA network carriers.³⁸ T-Mobile has a policy of unlocking any handset at a subscriber's request, and Verizon announced at the end of 2007 that it would open its network to any phone that meets a minimum technical standard and is operable on the CDMA network.³⁹ Even AT&T has announced that customers can use any handset of their choosing on its network.⁴⁰

Apple and AT&T, however, have resisted this wave of change with the iPhone.⁴¹ Indeed, the "iPhone is anything but open."⁴² The iPhone only works on a single carrier, AT&T, which uses a Subscriber Identity Module ("SIM") lock mechanism to prevent consumers from switching networks by barring other networks from accessing the copyrighted software inside the iPhone.⁴³ Under this system, a removable SIM card is attached to the phone, which allows it to be instantly activated, interchanged and upgraded.⁴⁴ The SIM card itself is tied to the AT&T network, rather than the phone, which could potentially allow consumers to swap cards to access networks without having to buy new phones.⁴⁵ In fact, AT&T will unlock SIM cards on other telephones like the BlackBerry Pearl and the Samsung Blackjack.⁴⁶ AT&T, however, will not unlock the iPhone.⁴⁷

B. Introducing the iPhone: A Revolutionary Cell Phone for the Consumer and a New Way of Conducting Business for the Cell Phone Industry

AT&T's refusal to unlock the iPhone SIM cards is consistent with the overall business model pursued by Apple and AT&T in the development and marketing of the iPhone, a model one commentator calls a "walled garden" approach: attract consumers to the iPhone and then lock them into Apple's and AT&T's networks.⁴⁸ Earning the exclusive

³⁸ *Id.*

³⁹ *Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d at 410; *A Cellular Sea Change*, *supra* note 36.

⁴⁰ Leslie Cauley, *AT&T Flings Cellphone Network Wide Open*, USA TODAY, Dec. 5, 2007, http://www.usatoday.com/tech/wireless/phones/2007-12-05-att_N.htm.

⁴¹ Netanel, *supra* note 17, at 78–80; *A Cellular Sea Change*, *supra* note 36.

⁴² *A Cellular Sea Change*, *supra* note 36.

⁴³ *Holman Complaint*, *supra* note 12, ¶¶ 29–34, at 6–7; *Exemption Proposal*, *supra* note 24, at 7.

⁴⁴ *Holman Complaint*, *supra* note 12, ¶ 29, at 6; *Exemption Proposal*, *supra* note 24, at 7.

⁴⁵ *Holman Complaint*, *supra* note 12, ¶¶ 29–34, at 6–7; *Exemption Proposal*, *supra* note 24, at 7; Wu, *supra* note 21, at 400–01.

⁴⁶ *Holman Complaint*, *supra* note 12, ¶ 34, at 7; Cauley, *supra* note 40.

⁴⁷ *Holman Complaint*, *supra* note 12, ¶ 34, at 7.

⁴⁸ See Netanel, *supra* note 17, at 78–80.

right to provide cellular service to iPhone purchasers was AT&T's move to steal customers away from competing service providers.⁴⁹ So far, the strategy has worked.⁵⁰ Following the release of the iPhone, AT&T's wireless revenue increased 14.4% to \$10.9 billion in the third quarter of 2007, thanks in part to 1.1 million iPhone customers.⁵¹ Forty percent of these new customers switched to AT&T from competitors.⁵²

The iPhone business deal with AT&T is just as lucrative for Apple.⁵³ In exchange for the exclusive right to provide cellular service to iPhone users for five years, AT&T shares its revenue on all iPhone contracts with Apple.⁵⁴ Although the companies have not released the exact terms of this revenue sharing agreement, one business analyst estimates that Apple receives as much as \$18 per month for each iPhone subscriber.⁵⁵ Apple, therefore, receives \$432 per iPhone subscriber over the course of a two-year contract.⁵⁶

The most remarkable aspect of the Apple-AT&T relationship is the unprecedented power that AT&T gave Apple in the design, manufacture and marketing of the iPhone.⁵⁷ Historically, wireless carriers have wielded the power in cell phone development.⁵⁸ The iPhone made Apple the first company to develop a cell phone without any input from a cellular carrier.⁵⁹

A unique product resulted from this unique business relationship, one that stands out among other "smart phones," a generic term used to refer to cell phones that can perform "smart" data services

⁴⁹ Laurie J. Flynn, *AT&T Profit Surges 41%, with Help from iPhone*, N.Y. TIMES, Oct. 24, 2007, at C4; Reinhardt Krause, *Wireless Leads as AT&T's Q3 Shows Growth*, INV. BUS. DAILY, Oct. 24, 2007 [hereinafter Krause, *AT&T Growth*].

⁵⁰ Krause, *AT&T Growth*, *supra* note 49.

⁵¹ *Id.*

⁵² *Id.*

⁵³ Tom Krazit, *Piper Jaffray: AT&T Paying Apple \$18 per iPhone, per Month*, CNET, Oct. 24, 2007, http://www.news.com/8301-13579_3-9803657-37.html; Vogelstein, *supra* note 27, at 122 (estimating that Apple nets \$80 for every \$399 iPhone it sells, in addition to \$240 for every two-year AT&T contract that an iPhone customer signs).

⁵⁴ Hahn et al., *supra* note 28, at 430; Krazit, *supra* note 53; Vogelstein, *supra* note 27, at 122.

⁵⁵ Krazit, *supra* note 53.

⁵⁶ *Id.*

⁵⁷ Walter S. Mossberg, *Free My Phone*, WALL ST. J., Oct. 22, 2007, at R1 [hereinafter Mossberg, *Free*]; Vogelstein, *supra* note 27, at 122.

⁵⁸ *Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d at 409-10; Mossberg, *Free*, *supra* note 57; Vogelstein, *supra* note 27, at 123.

⁵⁹ Mossberg, *Free*, *supra* note 57; Vogelstein, *supra* note 27, at 122-23.

like access email, send text messages, or manipulate spreadsheets.⁶⁰ The iPhone grants consumers unparalleled access to the Internet through a wireless device that also acts as a portable media player.⁶¹ Like Apple's iPod, the iPhone allows users to download and listen to music and movies purchased from iTunes.⁶² In fact, it is one of only two cell phones that have this capability.⁶³ Moreover, the iPhone is a visually attractive product, boasting what one *Wall Street Journal* author calls "the largest and most beautiful screen I've ever seen on a cell phone."⁶⁴ These features led *Time* magazine to anoint the iPhone as its Invention of the Year.⁶⁵

Many consumers have overlooked the iPhone's imperfections because of these innovative features.⁶⁶ These imperfections include its inability to perform email searches, record video, or run certain programs over the Internet.⁶⁷ Despite its initial price tag of \$599, Apple sold 1.4 million iPhones in the device's first three months on the market (outselling all other smart phones), and Apple is forecast to sell 12 million units by the end of 2008.⁶⁸ The iPhone has thus allowed Apple to rapidly catch up with competitors in the smart phone

⁶⁰ Lev Grossman, *Invention of the Year: The iPhone*, TIME, Nov. 12, 2007, at 60; Walter S. Mossberg, *BlackJack Beats Out Palm 750, but iPhone May Well Top Both*, WALL ST. J., Jan. 11, 2007, at B1 [hereinafter Mossberg, *BlackJack*]; Keith Reed, *How Smart Is Your Cellphone?*, BOSTON GLOBE, Sept. 5, 2005, at D1 (defining "smart phone"); Vogelstein, *supra* note 27, at 122, 125.

⁶¹ Jefferson Graham, *iPhone Mania Nears Fever Pitch*, USA TODAY, June 20, 2007, at 1B [hereinafter Graham, *iPhone Mania*].

⁶² See Netanel, *supra* note 17, at 79–80.

⁶³ See Smith Complaint, *supra* note 12, ¶ 34 at 7 (stating that the iPhone is the only cell phone that can play media from iTunes Music Store). But see MOTOROKR, <http://direct.motorola.com/hellomoto/rokr/> (last visited Feb. 28, 2008) (other cell phone capable of playing music off of iTunes).

⁶⁴ Mossberg, *BlackJack*, *supra* note 60. *Time* declared that the iPhone was 2007's best invention in part because the iPhone was "pretty." Grossman, *supra* note 60, at 60.

⁶⁵ Grossman, *supra* note 60, at 60.

⁶⁶ Vogelstein, *supra* note 27, at 125.

⁶⁷ Grossman, *supra* note 60, at 60; Vogelstein, *supra* note 27, at 125.

⁶⁸ Brian Garrity, *New iPod Keeps Apple Shares Crisp*, N.Y. POST, Sept. 5, 2007, at 33; Jefferson Graham, *iPhone's Future Intrigues Observers*, USA TODAY, Jan. 3, 2008, at 8A [hereinafter Graham, *iPhone's Future*]; Katie Hafner & Brad Stone, *iPhone Owners Crying Foul over Price Cut*, N.Y. TIMES, Sept. 7, 2007, at C1 (documenting Apple's \$200 price cut on the iPhone). Other smart phones include the Nokia N95 (\$700), Nokia N810 (\$480), Palm Centro (\$99), Sprint HTC Touch (\$250 after \$100 mail-in rebate), T-Mobile Shadow (\$150 after a \$150 instant discount and \$50 mail-in rebate), T-Mobile Sidekick LX (\$300), and Verizon Wireless LG Voyager (NA). See Ryan Kim, *Competitors Wrestling with iPhone*, S.F. CHRON., Nov. 5, 2007, at E1.

market.⁶⁹ By the end of the third quarter of 2007, the iPhone owned 27% of the smart phone market.⁷⁰ One research firm has claimed that the pace of adoption for the iPhone was "likely . . . unprecedented in the history of the mobile-handset market."⁷¹

Although consumers and commentators rave about the iPhone, they have been less enthused about the quality of AT&T's service.⁷² As one business analyst remarked: "The customer experience hasn't been that good,' Users are facing dropped calls, poor sound quality and slow Internet access."⁷³ Consumers have also voiced their displeasure on the blog, *i hate my iPhone*.⁷⁴ One user from Los Angeles wrote: "[A]t least 7 dropped calls a day every day. [S]ignal never clear. muffled or echo most of the time . . . [AT&T] is just the worst. and [S]teve [J]obs has lost my respect for doing the deal with them."⁷⁵ Another consumer was less specific with his criticism, writing, "I HATE AT[&]T. THESE PEOPLE ARE LOOSERS [sic]."⁷⁶ Others cannot experience the extent of AT&T's poor service because they live in areas where AT&T provides no service.⁷⁷ One Wisconsin consumer expressed her disappointment with her inability to access the AT&T

⁶⁹ Paul Vaughn, *It's Been a Banner Year for Apple, Inc.*, SAN ANTONIO EXPRESS, Dec. 30, 2007, at 02K.

⁷⁰ *Id.*

⁷¹ Garrity, *supra* note 68.

⁷² See Grossman, *supra* note 60, at 60; Quinn, *supra* note 4; Shaheen Samavati, *Cell Users Send Clear Signal: Service Is Less Than Ideal*, CLEVELAND PLAIN DEALER, Dec. 4, 2007, at A1; Silverman, *supra* note 4. Consumers have criticized AT&T even though the company attempted to improve its service specifically for the arrival of the iPhone. See Iljitsch van Beijnum, *AT&T Getting Its Network Ready for the iPhone*, ARS TECHNICA, June 5, 2007, <http://arstechnica.com/journals/apple.ars/2007/06/05/att-getting-its-network-ready-for-the-iphone> (explaining that AT&T retuned its cell towers to provide optimum coverage in areas where the iPhone is likely to be used); Vogelstein, *supra* note 27, at 122 (explaining that AT&T developed a new visual voice mail feature for the iPhone). Interestingly, the new visual voice mail feature developed by AT&T for the iPhone has been the subject of a patent infringement lawsuit. Rex Crum, *Lawsuit Cites Old Device in Complaint over iPhone*, ORLANDO SENTINEL, Dec. 4, 2007, at C5.

⁷³ Patrick Seitz, *In Eyeing Phone Battle, CEO Jobs Blinks*, INV. BUS. DAILY, Sept. 6, 2007, at A4.

⁷⁴ I Hate my iPhone, <http://www.ihatemyiphone.com> (last visited Feb. 25, 2008).

⁷⁵ Posting of filmnaker257 to I Hate My iPhone, http://www.ihatenyiphone.com/hate_64/ (2007).

⁷⁶ Posting of TEX to I Hate My iPhone, http://www.ihatemyiphone.com/hate_69/ (2007).

⁷⁷ See Robert Imrie, *iPhone Service Gaps Are Big Letdown: New Device Uses Limited AT&T Network*, ST. PAUL PIONEER PRESS (Minn.), June 30, 2007, at B1 (explaining that there is limited service in parts of Wisconsin, Vermont, the Dakotas, and Alaska); Silverman, *supra* note 4 (noting that one consumer purchased an iPhone even though AT&T offers no wireless service in his home state of Vermont).

network, saying, "I do want [an iPhone]. . . . I have nearly every other Apple product that I can get my hands on. [I]Phone is just all of them put together. Being in Wausau, it is just not possible. All my friends are quite disappointed."⁷⁸ A Consumer Reports survey taken at the end of 2007 affirms these complaints: AT&T's cellular service ranks second-to-last in customer satisfaction.⁷⁹

II. THE DIGITAL MILLENNIUM COPYRIGHT ACT AND THE CELL PHONE EXEMPTION

Although Apple may have revolutionized the cell phone industry with the iPhone, its method of locking consumers into the AT&T network through technological means is relatively common in the digital age.⁸⁰ Problems arise when consumers bypass the technological protection mechanisms and software locks meant to prevent certain uses.⁸¹ The next section addresses Congress' response to this circumvention problem through the Digital Millennium Copyright Act (the "DMCA" or the "Act").⁸²

A. The DMCA's Anti-Circumvention Provisions

Under Section 106 of the Copyright Act, owners of copyrights have the exclusive right and authority to reproduce and distribute copies of their copyrighted works.⁸³ In the digital world, the same technological innovations that allow businesses to offer their copyrighted materials online also allow individuals to pirate those materi-

⁷⁸ Imrie, *supra* note 77.

⁷⁹ Samavati, *supra* note 72.

⁸⁰ See Netanel, *supra* note 17, at 77–78; Sharpe & Arewa, *supra* note 12, at 332–35; Mauricio España, Note, *The Fallacy That Fair Use and Information Should Be Provided for Free: An Analysis of the Responses to the DMCA's Section 1201*, 31 FORDHAM URB. L.J. 135, 148–54 (2003) (summarizing the various technological protection measures available to copyright holders of digital works). Copyright holders use digital rights management to prevent consumers from illegally copying CDs and DVDs. See Universal City Studios, Inc. v. Corley, 273 F.3d 429, 436–37 (2d Cir. 2001); Eran Kahana, *Sony's DRM Experience: When Copyright Protection Attacks*, 60 CONSUMER FIN. L.Q. REP. 627, 627–28 (2006). TicketMaster, an online retailer of entertainment and sports tickets, uses a computer security program to prevent purchasers from using automated devices to purchase tickets. Ticketmaster, L.L.C. v. RMG Techs., Inc., 507 F. Supp. 2d 1096, 1102 (C.D. Cal. 2007). In effect, as firms have explored the new business opportunities offered by the Internet and the digital revolution, they have also explored new ways of controlling how consumers interact with their products. See *id.*; Sharpe & Arewa, *supra* note 12, at 332–35.

⁸¹ España, *supra* note 80, at 144–46.

⁸² See *infra* notes 83–143 and accompanying text.

⁸³ 17 U.S.C. § 106 (2000 & Supp. V 2005).

als.⁸⁴ With the click of a mouse, infringers can copy and disseminate songs, movies, books, and other copyrighted works across the world.⁸⁵ The music industry, for example, estimates that 243 million downloads of copyrighted files occur every month through the use of peer-to-peer networks.⁸⁶

In response to piracy threats, content providers have largely resorted to self-help measures to protect their copyrighted works.⁸⁷ Using encryption technologies and digital rights management, content providers have attempted to exercise greater control over how consumers access and use copyrighted materials.⁸⁸ In response, a number of tech-savvy individuals have circumvented the technological protection measures, thus revealing a major gap in copyright law.⁸⁹ If content providers have no way of controlling the access and use of their copyrighted materials, they will stop making their works available in digital formats.⁹⁰

To address this problem, Congress passed the DMCA.⁹¹ The DMCA imposes legal sanctions on both the act of circumvention of encryption measures and the distribution of products and services that help others circumvent encryption.⁹² Section 1201(a) of the Act addresses the circumvention of access controls, which are technological measures designed to restrict access to a copyrighted work.⁹³ Section

⁸⁴ España, *supra* note 80, at 136, 144–46.

⁸⁵ See *id.*

⁸⁶ Music United, <http://musicunited.org> (last visited Oct. 5, 2007).

⁸⁷ See Netanel, *supra* note 17, at 77–78; Sharpe & Arewa, *supra* note 12, at 332–35; España, *supra* note 80, at 148–54.

⁸⁸ See *Universal City Studios*, 273 F.3d at 436–37, 440.

⁸⁹ See España, *supra* note 80, at 153–54.

⁹⁰ See S. REP. NO. 105-190, at 8, 11 (1998).

⁹¹ Digital Millennium Copyright Act, Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C.); see also Joseph P. Liu, *Copyright Law's Theory of the Consumer*, 44 B.C. L. REV. 397, 428 (2003) (describing the rationale underlying the DMCA). This Note will focus on the anti-circumvention provisions of the DMCA. 17 U.S.C. § 1201 (2000).

⁹² S. REP. NO. 105-190, at 11 (analogizing the provisions “to making it illegal to break into a house using a tool, the primary purpose of which is to break into houses”); Dan L. Burk, *Legal and Technical Standards in Digital Rights Management Technology*, 74 FORDHAM L. REV. 537, 557–61 (2005) (providing an overview of the DMCA’s legislative history, as well as its use as a deterrent against the circumvention of technological protection measures) [hereinafter Burk, *Legal and Technical*]. One commentator refers to the DMCA in the context of digital rights management as “the double punch of law and technology.” Bach, *supra* note 20, at 1.

⁹³ See 17 U.S.C. § 1201(a); Burk, *Legal and Technical*, *supra* note 92, at 558–59 (criticizing the DMCA for creating a new and unprecedented right to control access to copyrighted works); Lance C. McCardle, Note, *Despite Congress’s Good Intentions, The DMCA’s*

1201(b) addresses the circumvention of rights controls, which are technological measures designed to prohibit the copying or distributing of a copyrighted work.⁹⁴ Under both sections, it is unlawful to traffic in devices or technologies primarily designed or produced for the purpose of circumventing technological protection measures.⁹⁵ The two sections are distinguishable in that § 1201(a)(1) prohibits the actual act of circumventing an access control.⁹⁶ There is no corresponding prohibition on the act of circumventing a rights control mechanism.⁹⁷

B. Wireless Connection Exemption

In crafting the anticircumvention provisions of the DMCA, Congress was careful not to tip the copyright balance too far in favor of copyright owners at the expense of the general public.⁹⁸ For example, pursuant to her rulemaking authority under § 1201(a)(1)(C), the Librarian of Congress granted a wireless connection exemption that allows individuals to circumvent the technological protection measures that control access to "the firmware that enable wireless telephone handsets to connect to a wireless telephone communications network, when circumvention is accomplished for the sole purpose of lawfully connecting to a wireless telephone communication network."⁹⁹ In

Anti-Circumvention Provisions Produce a Bad Result—A Means to Create Monopolies, 50 LOY. L. REV. 997, 1005–06 (2004) (noting that the anti-access provision of the DMCA makes it illegal to circumvent a technological measure protecting a copyrighted work, regardless of whether that circumvention results in copyright infringement).

⁹⁴ See 17 U.S.C. § 1201(b).

⁹⁵ See *id.* § 1201(a)–(b).

⁹⁶ See *id.*

⁹⁷ See *id.*

⁹⁸ See *Chamberlain Group v. Skylink Techs., Inc.*, 381 F.3d 1178, 1192–96 (Fed. Cir. 2004). For example, Congress included a saving clause to assure that the anticircumvention provisions are not used to obstruct other rights. See 17 U.S.C. § 1201(c)(1). Section 1201(c)(1) states, "Nothing in this section shall affect rights, remedies, limitations, or defenses to copyright infringement, including fair use, under this title." *Id.* Similarly, § 1201(c)(4) mandates that "[n]othing in this section shall enlarge or diminish any rights of free speech or the press for activities using consumer electronics, telecommunications, or computing products." *Id.* § 1201(c)(4). In addition, Congress exempted certain circumventing activities, including reverse engineering. *Id.* § 1201(f). For more on how Congress's balancing with the DMCA fits within the much larger, ongoing debate between rights holders and consumers, see Peter K. Yu, *Anticircumvention and Anti-anticircumvention*, 84 DENV. U. L. REV. 13, 16–32 (2006).

⁹⁹ Exemption to Prohibition on Circumvention of Copyright Protection Systems for Access Control Technologies, 71 Fed. Reg. 68,472, 68,476 (proposed Nov. 27, 2006) (to be codified at 37 C.F.R. pt. 201) [hereinafter Librarian Rulemaking]. Every three years the DMCA requires the Librarian to identify certain classes of copyrighted works to which the anticircumvention provision will not apply because users will be "adversely affected by the

other words, circumventing or removing cell phone locks in order to lawfully access a competing network does not constitute copyright infringement.¹⁰⁰ Although opponents of the exemption argued that it might allow users to gain unauthorized access to copyrighted works downloaded onto cell phones, the exemption was carefully written, allowing circumvention for the *sole purpose* of lawfully connecting to a competitor's network.¹⁰¹ The Librarian, upon the recommendation of the Register of Copyrights, concluded that the software locks are access controls that adversely affect the ability of consumers to make noninfringing use of the software on their phones.¹⁰²

In proposing the exemption, the Wireless Alliance, a firm that recycles and resells used, refurbished, and new cellular products, argued that cell phone locking hurts competition and innovation.¹⁰³ By making it difficult for consumers to switch wireless carriers, carriers have less incentive to improve their networks because there is little fear that consumers will switch to a competitor.¹⁰⁴

prohibition . . . in their ability to make noninfringing uses under this title of a particular class of copyrighted works." 17 U.S.C. § 1201(a)(1)(C). For more on the Librarian Rulemaking, see generally Aaron Perzanowski, *Evolving Standards & the Future of DMCA Anticircumvention Rulemaking*, 10 J. INTERNET L. 1 (2007).

¹⁰⁰ Librarian Rulemaking, 71 Fed. Reg. at 68,476-77; Perzanowski, *supra* note 99, at 16.

¹⁰¹ See Librarian Rulemaking, 71 Fed. Reg. at 68,476.

¹⁰² See *id.* at 68,476-77.

¹⁰³ Exemption Proposal, *supra* note 24, at 4-5. One scholar also explained how cell phone locking could harm competition and innovation, drawing insight from the FCC's *Carterfone* rules of the 1960s and 1970s (which gave consumers the right to attach whatever devices they wanted to their phone lines) and the tremendous innovation and competition that those rules created in the telecommunications industry. See Wu, *supra* note 21, at 395-98.

Other commentators criticized the DMCA for its negative impact on competition. See Dan L. Burk, *Anticircumvention Misuse*, 50 UCLA L. REV. 1095, 1096-97 (2003) [hereinafter Burk, *Anticircumvention*]; Burk, *Legal and Technical*, *supra* note 92, at 561-68; McCardle, *supra* note 93, at 997-99; Yu, *supra* note 98, at 38. Another commentator argued that the DMCA will not generate anticompetitive effects even if manufacturers see it as a way of precluding competition in aftermarket as long as courts carefully interpret the statute's language and its legislative history. See Daniel C. Higgs, Lexmark International, Inc. v. Static Control Components, Inc. & Chamberlain Group, Inc. v. Skylink Techs, Inc.: *The DMCA and Durable Goods Aftermarkets*, 19 BERKELEY TECH. L.J. 59, 77-83 (2004).

¹⁰⁴ Exemption Proposal, *supra* note 24, at 4-5. The Wireless Alliance made several other arguments in favor of the exemption as well. *Id.* at 4-6. For one, it argued that locking hurts the environment. *Id.* at 5-6. Once a service contract is complete, consumers have no use for a cell phone that they cannot unlock and use with a new service provider. *Id.* Consequently, Americans discard 150 million mobile phones per year, a troubling statistic given that the phones are incinerated, releasing toxic chemicals into the environment. *Id.* In addition, the Wireless Alliance argued that locking contributes to the "digital divide," a phrase used to capture the disparity between rich and poor countries' access to new technological innovations. *Id.* Unlocking would give poorer nations access to second-hand cell

Reiterating the Wireless Alliance's arguments, the recommendation of the Register of Copyrights also emphasized the overwhelming support for the proposal, noting only one comment opposing the exemption.¹⁰⁵ The Register of Copyrights also defended the exemption on the ground that it would not undermine the purposes of the DMCA's anticircumvention provision.¹⁰⁶ In fact, the Register of Copyrights recognized that the access controls were not used to protect the value or integrity of copyrighted works, but rather to limit the ability of subscribers to switch to other carriers, a business decision that has little to do with copyright law.¹⁰⁷ Finally, the Register of Copyrights argued that a strict interpretation of § 1201 would likely condemn the circumvention of a cell phone's software lock, even if only to connect to a new network.¹⁰⁸ With these policy considerations in mind, the Register recommended the wireless connection exemption to avoid such a dangerous interpretation of the DMCA.¹⁰⁹

To date, only one court has applied the exemption.¹¹⁰ In 2007, the U.S. District Court for the Middle District of Florida in *TracFone Wireless v. Dixon* found that the defendants' conduct did not come within the scope of the exemption.¹¹¹ In that case, the defendants purchased the plaintiff's prepaid wireless telephones in bulk, circumvented the software locks that enabled the phones to work exclusively on the plaintiff's wireless system, and sold the unlocked phones at a premium to the public.¹¹² The court refused to apply the exemption because the defendants resold the handsets for a profit and therefore did not unlock them for the sole purpose of lawfully connecting to a wireless telephone communication network.¹¹³

phones, thereby allowing all consumers to share in the information revolution. *Id.* In fact, an extra ten phones per 100 people in a typical developing country increases Gross Domestic Product by 0.6 percentage points. *Id.*

¹⁰⁵ Letter from Marybeth Peters, Register of Copyrights, to James H. Billington, Librarian of Congress (Nov. 17, 2006), at 42, available at http://www.copyright.gov/1201/docs/1201_recommendation.pdf [hereinafter Copyright Register Recommendation].

¹⁰⁶ *Id.* at 48–52.

¹⁰⁷ *Id.* at 52; see Perzanowski, *supra* note 99, at 16.

¹⁰⁸ Copyright Register Recommendation, *supra* note 105, at 51.

¹⁰⁹ *Id.* at 52–53.

¹¹⁰ *TracFone Wireless, Inc. v. Dixon*, 475 F. Supp. 2d 1236, 1238 (M.D. Fla. 2007).

¹¹¹ *Id.*

¹¹² See *id.* at 1237.

¹¹³ See *id.* at 1238.

C. Courts Interpret the Anti-Circumvention Provisions of the DMCA

The *TracFone* case illustrates a recurring problem facing courts charged with interpreting the DMCA's anticircumvention provisions.¹¹⁴ Congress passed the DMCA to give content providers a legal weapon to attack the piracy of copyrighted works, but cases invoking the law have often dealt with obscure software embedded in products.¹¹⁵ Individuals circumvent access controls guarding this software not to pirate the copyrighted work, but to allow the product to perform some other function against the producer's wishes.¹¹⁶

In 2004, for example, the U.S. Court of Appeals for the Sixth Circuit held in *Lexmark International, Inc. v. Static Control Components, Inc.* that the defendant did not violate the DMCA's anticircumvention provision.¹¹⁷ There, the plaintiff, a computer printer manufacturer, sold toner cartridges for its printers that only it could refill because the cartridges contained a microchip designed to prevent the printers from working with a competitor's toner cartridges.¹¹⁸ The defendant, in an effort to support the market for competing toner cartridges, mimicked the plaintiff's microchip to allow third-party cartridges to work with the plaintiff's printers.¹¹⁹ The plaintiff sued under § 1201(a)(2) of the DMCA, claiming that the defendant circumvented the plaintiff's technological measure (the microchip), which effectively controlled access to its copyrighted works—the Toner Loading Program and Printer Engine Program—two pieces of software embedded in the plaintiff's printers.¹²⁰

In holding that the defendant did not violate the DMCA, the court first held that the Toner Loading Program was not copyrightable; therefore, the defendant did not circumvent any technological measure controlling access to a *copyrighted* work.¹²¹ Second, the court held that it was the purchase of the plaintiff's printer that controlled access to the copyrighted Printer Engine Program, not the microchip.¹²² Any-

¹¹⁴ See *id.*

¹¹⁵ See *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 529–33 (6th Cir. 2004); *Chamberlain*, 381 F.3d at 1183–85; S. REP. NO. 105-190, at 11; Yu, *supra* note 98, at 38.

¹¹⁶ See *Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1199–1203.

¹¹⁷ *Lexmark*, 387 F.3d at 546.

¹¹⁸ *Id.* at 528–30.

¹¹⁹ *Id.* at 529.

¹²⁰ *Id.* at 529, 546.

¹²¹ *Id.* at 550; McCordle, *supra* note 93, at 1015–16.

¹²² *Lexmark*, 387 F.3d at 549–50; McCordle, *supra* note 93, at 1016.

one who bought a printer from the plaintiff could easily read the literal code of the Printer Engine Program directly from the printer memory without having to circumvent the microchip.¹²³ Hence, the court held, the microchip that the defendant circumvented did not *effectively control access* to the plaintiff's copyrighted work.¹²⁴

In a concurring opinion, Judge Merritt emphasized that the defendant's purpose, though commercial in nature, was only to sell cartridges that could be used by the plaintiff's printers, rather than to profit by infringing the plaintiff's copyright.¹²⁵ Consequently, even if the plaintiff's Toner Loading Program were copyrightable, or if consumers had no way of accessing the Printer Engine Program, Judge Merritt opined that the defendant would still not have violated the Act.¹²⁶ The defendant circumvented the plaintiff's microchip not to "reap any benefit" from the copyrighted works, but only to stimulate competition in the cartridge market.¹²⁷ Judge Merritt feared that holding for the plaintiff or even narrowly construing the majority opinion could allow companies to use the DMCA in the future to create monopolies in the market for replacement parts.¹²⁸

In the same year as *Lexmark*, the U.S. Court of Appeals for the Federal Circuit in *Chamberlain Group, Inc. v. Skylink Technologies, Inc.* faced a similar issue in the context of garage door openers.¹²⁹ Garage door openers usually consist of two devices: a handheld portable transmitter and an opening device mounted to the homeowner's garage.¹³⁰ To open the door, the user activates the transmitter, which sends a signal to the opening device.¹³¹ A software program in the opening device then triggers the opening of the door.¹³² Although garage door opener manufacturers sell their opening devices and

¹²³ *Lexmark*, 387 F.3d at 546.

¹²⁴ *Id.* at 549–50.

¹²⁵ *Id.* at 551–52 (Merritt, J., concurring).

¹²⁶ *See id.*

¹²⁷ *Id.*; Burk, *Anticircumvention*, *supra* note 103, at 1110 ("[T]his claim has nothing to do with the pirating of music or other copyrighted content; rather, it is a fairly naked attempt to suppress competition in the market for printer ink cartridges.").

¹²⁸ *See Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring). In line with Judge Merritt's reasoning, one commentator argued that Congress should rewrite the DMCA so that courts do not have to "search for creative reasons to refrain from applying the DMCA in *Lexmark*-like situations," fearing that companies will just tweak the facts of the *Lexmark* case to fit under the DMCA. *See id.*; McCardle, *supra* note 93, at 1017–18.

¹²⁹ *See Chamberlain*, 381 F.3d at 1183–85.

¹³⁰ *Id.* at 1183.

¹³¹ *Id.*

¹³² *Id.*

transmitters in one package, customers have the option of purchasing replacement or spare transmitters in the aftermarket.¹³³ The plaintiff in this case manufactured and sold its garage door openers equipped with a security measure embedded in the transmitter.¹³⁴ The defendant manufactured a transmitter that allowed users to bypass the plaintiff's security measure to operate the plaintiff's opening device.¹³⁵ The plaintiff claimed that the defendant violated § 1201(a)(2) by trafficking in a transmitter that circumvented the plaintiff's security measure designed to prevent access to copyrighted software embedded in the plaintiff's opening device.¹³⁶

As in *Lexmark*, the court rejected the plaintiff's § 1201(a)(2) claim.¹³⁷ When consumers purchased the plaintiff's garage door opener, the court said, they were granted authority to access the copyrighted software, thus allowing them to use third-party transmitters to operate the opening device.¹³⁸ Given this implicit authorization, the court refused to hold the defendants liable for trafficking in a device (the transmitter) primarily designed for the purpose of circumventing a technological protection measure (the plaintiff's security measure) effectively controlling access to a copyrighted work (the software in the plaintiff's opening device).¹³⁹

In reaching this conclusion, the court rejected the plaintiff's claim that the DMCA empowered manufacturers to prohibit consumers from using embedded software products in conjunction with competing products.¹⁴⁰ This type of empowerment would conflict with the copyright owner's other legal responsibilities, particularly those imposed by antitrust laws.¹⁴¹ The plaintiff's construction of the DMCA would allow manufacturers to leverage sales in a primary market into monopolies in an aftermarket, a practice that violates antitrust laws and the doctrine of copyright misuse.¹⁴²

¹³³ *Id.*

¹³⁴ *Chamberlain*, 381 F.3d at 1183-85.

¹³⁵ *Id.* at 1183.

¹³⁶ See 17 U.S.C. § 1201(a)(2); *Chamberlain*, 381 F.3d at 1185.

¹³⁷ See *Lexmark*, 387 F.3d at 549-50; *Chamberlain*, 381 F.3d at 1202.

¹³⁸ *Chamberlain*, 381 F.3d at 1204; Burk, *Legal and Technical*, *supra* note 92, at 566, 568 (explaining that the implicit license to use the garage door opener with competing products could easily have been revoked by a shrink-wrap contract giving the plaintiff a cause of action under the DMCA).

¹³⁹ See *Chamberlain*, 381 F.3d at 1203-04.

¹⁴⁰ See *id.* at 1193, 1201-02.

¹⁴¹ *Id.* at 1194, 1201-02.

¹⁴² *Id.* at 1201. The majority in *Chamberlain*, like Judge Merritt in his *Lexmark* concurrence, did not want to allow "any manufacturer of any product to add a single copyrighted

Both *Lexmark* and *Chamberlain* reveal the thin line between intellectual property and antitrust law and show that copyright holders can exploit the DMCA to restrict competition unlawfully.¹⁴³ The next part explores the antitrust issues in more depth, paying specific attention to tying arrangements.¹⁴⁴

III. TYING ARRANGEMENTS AND SECTION 1 OF THE SHERMAN ANTITRUST ACT

A tying arrangement is an agreement by a party to sell a product (the tying product) only on the condition that buyers also purchase a different product (the tied product), or at least agree that they will not purchase the tied product from any other supplier.¹⁴⁵ Tying the sale of two products that could be sold separately is a common practice in the marketplace: left shoes are sold with right shoes, and the sports section of a newspaper is sold in a bundled package with the business section.¹⁴⁶ Thus, the U.S. Supreme Court has been careful not to declare all tying arrangements unlawful, but only those that restrain competition, such arrangements being prohibited by Section 1 of the Sherman Antitrust Act.¹⁴⁷

A tying arrangement is illegal when the seller exploits his or her control over the tying product to force the buyer to purchase the tied

sentence or software fragment to its product, wrap the copyrighted material in a trivial 'encryption' scheme, and thereby gain the right to restrict consumers' rights to use its products in conjunction with competing products." See *id.*; see also *Lexmark*, 387 F.3d 551–52 (Merritt, J., concurring). This type of behavior gives producers the ability to gain monopolies in aftermarkets by precluding others from competing. *McCardle*, *supra* note 93, at 1019.

¹⁴³ See *Lexmark*, 387 F.3d 551–52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1201.

¹⁴⁴ See *infra* notes 145–213 and accompanying text.

¹⁴⁵ *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 461 (1992); *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

¹⁴⁶ David S. Evans & Michael Salinger, *Why Do Firms Bundle and Tie? Evidence from Competitive Markets and Implications for Tying Law*, 22 YALE J. ON REG. 37, 37 (2005); Alan J. Meese, *Tying Meets the New Institutional Economics: Farewell to the Chimera of Forcing*, 146 U. PA. L. REV. 1, 1–2 (1997).

¹⁴⁷ See 15 U.S.C. § 1 (2006); *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 11–12 (1984). Ties have also been challenged as improper extensions of the patent monopoly under the patent misuse doctrine, as unfair methods of competition under § 5 of the Federal Trade Commission Act, and as contracts tending to create a monopoly under § 3 of the Clayton Act. See *Ill. Tool Works, Inc. v. Indep. Ink, Inc.*, 547 U.S. 28, 34 (2006). Because the substantive law governing tying arrangements is analogous across the various statutes, this Note will focus on § 1 of the Sherman Act, which has the broadest reach. See *Fortner Enters. Inc. v. U.S. Steel Corp. (Fortner I)*, 394 U.S. 495, 521 (Fortas, J., dissenting) (1969).

product that the buyer either did not want or would have preferred to purchase from another seller on different terms.¹⁴⁸ This kind of tying arrangement undermines one of the tenets of a free economy, namely that goods must withstand the "cold test of competition" and that the consuming public must be able to choose a product or service on its merits.¹⁴⁹ Unrestrained competition is important because it yields the best allocation of economic resources, the lowest prices, the highest quality goods, and the greatest material progress, while still preserving democratic, political, and social institutions.¹⁵⁰ When a tying arrangement forces the consumer to buy one product with another, the seller insulates the tied good from competitive pressures, to the detriment of both consumers and producers.¹⁵¹

On the consumer side, an illegal tie forces consumers to make choices they would not make in a competitive market.¹⁵² Specifically, the need to purchase the tying product impairs the freedom of consumers to select the best bargain in the market for the tied good.¹⁵³ Tying arrangements also harm consumers when sellers exploit information defects by complicating purchase decisions.¹⁵⁴ Instead of allowing con-

¹⁴⁸ *Jefferson Parish*, 466 U.S. at 12.

¹⁴⁹ See *id.* at 14; *Times-Picayune Publ'g Co. v. United States*, 345 U.S. 594, 605 (1953).

¹⁵⁰ *N. Pac. Ry.*, 356 U.S. at 4; Joseph F. Brodley, *The Economic Goals of Antitrust: Efficiency, Consumer Welfare, and Technological Progress*, 62 N.Y.U. L. REV. 1020, 1023 (1987) ("In briefest compass, the economic goal of antitrust policy is to increase the material welfare of society through the instrument of interfirm rivalry.").

¹⁵¹ *Jefferson Parish*, 466 U.S. at 14.

¹⁵² *Id.* at 15; *Fortner I*, 394 U.S. at 512 (White, J., dissenting).

¹⁵³ *Jefferson Parish*, 466 U.S. at 15; *Fortner I*, 394 U.S. at 512 (White, J., dissenting) ("This distortion injures the buyers of the second product, who because of their preference for the seller's brand of the first are artificially forced to make a less than optimal choice in the second."); Meese, *supra* note 146, at 16.

¹⁵⁴ See *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Warren S. Grimes, *Antitrust Tie-In Analysis After Kodak: Understanding the Role of Market Imperfections*, 62 ANTITRUST L.J. 263, 266-67 (1994) (arguing that the real policy interest in condemning tying arrangements is to curb the ability of a producer to exploit informational asymmetries in order to get the purchaser to make a decision he would not make in a freely competitive market); cf. *Eastman Kodak*, 504 U.S. at 473-74 (finding that Kodak had engaged in an illegal tying arrangement by taking advantage of the high information and switching costs incurred by consumers).

It is ambiguous, however, whether this holding applies to a situation where the consumer is fully aware of the producer's tying arrangement in the aftermarkets at the time of purchase in the primary market. Compare *PSI Repair Servs., Inc. v. Honeywell, Inc.*, 104 F.3d 811, 820 (6th Cir. 1997) (holding that the change in policy was crucial to the decision in *Eastman Kodak* and that, by changing its policy after its customers were "locked in," Kodak took advantage of the fact that its customers lacked the information to anticipate the change), with Grimes, *supra* at 273-74 (explaining that high information costs allow sellers to exploit consumers through tying arrangements, regardless of whether there is a change

sumers to assess the quality of products separately, thus enabling them to make better decisions, ties force consumers to make a decision on two products simultaneously.¹⁵⁵ This becomes a problem when the consumer knows less about the tied product, or must incur great costs to learn more.¹⁵⁶ In that situation, the lure of the tying product causes the consumer to make a less than optimal decision on the tied product.¹⁵⁷ Finally, tying arrangements harm consumers by allowing producers to extract a premium from buyers by forcing them to pay a higher price for the tied product than they would in a competitive market.¹⁵⁸

in policy). One explanation for the difference between the Sixth Circuit's interpretation of *Eastman Kodak* and Grimes' interpretation is that the Sixth Circuit addressed information costs in the context of market power, concluding that market imperfections arising out of information costs alone cannot prove market power in the tying product. See *PSI Repair Servs., Inc.*, 104 F.3d at 820. In contrast, Grimes addressed information costs in the context of the anticompetitive effects of tying arrangements, arguing that complicated tying arrangements can reduce the quality of consumer demand by taking advantage of a less-informed choice. See Grimes, *supra* at 274. Therefore, the two contrasting views can be reconciled by concluding that market failures relating to information are not enough to prove market power in the tying product, but could be used to show the anticompetitive effects of a tying arrangement if the consumer proved market power in another way. See *PSI Repair Servs., Inc.*, 104 F.3d at 820–21; Grimes, *supra* at 274.

¹⁵⁵ *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Grimes, *supra* note 154, at 267.

¹⁵⁶ Grimes, *supra* note 154, at 274, 276–77.

¹⁵⁷ See *Fortner I*, 394 U.S. at 512 (White, J., dissenting).

¹⁵⁸ See Meese, *supra* note 146, at 22–33 (analyzing the Chicago School's economic justifications for tying arrangements against the Traditional School's criticism of tying arrangements). The Chicago School's approach, articulated by Justice O'Connor in *Jefferson Parish*, argues that most tying arrangements are not anticompetitive because the existence of a tied product normally does not increase the profit that the seller with market power can extract from sales of the tying product. 466 U.S. at 35–36 (O'Connor, J., concurring). The Chicago School analogizes the tie to a price increase in the tying product; therefore, the profits a producer receives from the sale of the tied product are washed out by the revenue the producer loses from the lower demand on the tying product. See Meese, *supra* note 146, at 23–24. The Traditional Approach, on the other hand, views the transfer of wealth from consumers to producers as the true harm of tying arrangements, regardless of whether producers are extracting additional revenues from consumers above and beyond what they would have extracted if they sold the tied products separately. See Brodley, *supra* note 150, at 1032–35; Robert H. Lande, *Wealth Transfers as the Original and Primary Concern of Antitrust: The Efficiency Interpretation Challenged*, 34 *HASTINGS L.J.* 65, 93–96 (1982); Meese, *supra* note 146, at 29. Although this Note does not attempt to evaluate the economic consequences of tying arrangements, it is important to recognize that the Sherman Act was designed to prevent contracts or combinations that redistribute income from consumers to producers in an effort to promote economic as well non-economic values like social and political autonomy. See Lande, *supra* at 93–96; Meese, *supra* note 146, at 29–32. Even Justice O'Connor concedes that tying arrangements can be economically harmful when power in the market for the tying product is used to create additional market power in the market for the tied product. *Jefferson Parish*, 466 U.S. at 36 (O'Connor, J., concurring).

Tying arrangements can also have negative consequences on the producer side, particularly in the market for the tied good.¹⁵⁹ By forcing consumers to make less than optimal purchase decisions on the tied product, tying arrangements can potentially insulate inferior tied products from competitive pressures.¹⁶⁰ This hurts other producers of the tied good when the tying arrangement forecloses a group of consumers from the tied market that would otherwise be available to the competing producers.¹⁶¹ Furthermore, tying arrangements erect barriers to entry in the tied market.¹⁶² In order to sell a competing product to certain buyers, a new company must not only produce the tied product, but it also must overcome consumers' preferences for the tying product.¹⁶³

Drawing the line between acceptable tying arrangements and those violating antitrust laws has been a challenging task for the judi-

¹⁵⁹ *Jefferson Parish*, 466 U.S. at 14–15; *Fortner I*, 394 U.S. at 512–13 (White, J., dissenting); *Times-Picayune*, 345 U.S. at 605–06.

¹⁶⁰ *Jefferson Parish*, 466 U.S. at 14; *Times-Picayune*, 345 U.S. at 605.

¹⁶¹ See *Fortner I*, 394 U.S. at 508; *Times-Picayune*, 345 U.S. at 605; Evans & Salinger, *supra* note 146, at 50–51; Christopher R. Leslie, *Cutting Through Tying Theory with Occam's Razor: A Simple Explanation of Tying Arrangements*, 78 TUL. L. REV. 727, 732–33 (2004); Michael D. Whinston, *Tying, Foreclosure, and Exclusion*, 80 AM. ECON. REV. 837, 837 (1990). This argument is also known as the leverage theory because the tying arrangement provides a mechanism whereby a firm can leverage its market power over the tying product to foreclose sales in, and thereby monopolize, the tied market. Leslie, *supra* at 732–736; Whinston, *supra* at 837. The Chicago School has challenged the leverage theory, arguing that a monopolist has neither the incentive, nor the ability to leverage monopoly into another market. Evans & Salinger, *supra* note 146, at 39–40. One economist, however, has shown that firms can use tying arrangements strategically to foreclose sales in the tied good market, which could drive competitors out of the tied market. Whinston, *supra* at 840. The U.S. Supreme Court has endorsed to the leverage theory as one reason to condemn certain tying arrangements. See *Eastman Kodak*, 504 U.S. at 478 (“The alleged conduct—higher service prices and market foreclosure—is facially anticompetitive and exactly the harm that antitrust laws aim to prevent.”); *Jefferson Parish*, 466 U.S. at 13–14 (“We have condemned tying arrangements when the seller has some special ability—usually called ‘market power’—to force a purchaser to do something that he would not do in a competitive market.”); *id.* at 36–37 (O’Connor, J., concurring) (“The antitrust law is properly concerned with tying when, for example, the flour monopolist threatens to use its market power to acquire additional power in the sugar market, perhaps by driving out competing sellers of sugar, or by making it more difficult for new sellers to enter the sugar market.”); *Fortner I*, 394 U.S. at 508 (“[T]he seller can use his power over the tying product to win customers that would otherwise have constituted a market available to competing producers of the tied product.”).

¹⁶² *Jefferson Parish*, 466 U.S. at 14; *Fortner I*, 495 U.S. at 509.

¹⁶³ See *Fortner I*, 495 U.S. at 509; *id.* at 513 (White, J., dissenting) (“They must be prepared not only to match existing sellers of the tied product in price and quality, but to offset the attraction of the tying product itself.”).

cial system.¹⁶⁴ In the past century, the U.S. Supreme Court has fluctuated in its treatment of tying arrangements, accepting the practice initially, completely reversing course, and then settling on its current middle ground of condemning tying arrangements that meet certain conditions.¹⁶⁵

The following four conditions must be met for a court to condemn a tying arrangement under Section 1 of the Sherman Act: (1) the producer must sell two distinct products or services tied together,¹⁶⁶ (2) the producer must possess substantial economic power over the tying prod-

¹⁶⁴ See Meese, *supra* note 146, at 2–3. The scholarly literature on tying arrangements reflects the challenge facing courts. See *id.* See generally Victor H. Kramer, *The Supreme Court and Tying Arrangements: Antitrust as History*, 69 MINN. L. REV. 1013 (1985) (explaining that the scholarly debate regarding the legitimate objectives of antitrust law has affected the Supreme Court's treatment of tying arrangements).

¹⁶⁵ See *Henry v. A.B. Dick Co.*, 224 U.S. 1, 25–28, 31–32 (1912). In its 1912 decision in *Henry*, the U.S. Supreme Court held the defendant liable for patent infringement because the defendant used the patented machine with supplies purchased from competitors of the patent owner, even though, in licensing the machine, the patent owner mandated that the defendant purchase all supplies from the patent owner. *Id.* Although the Court did not directly address the issue as a tying arrangement, a later case, *Motion Pictures Patent Co. v. Universal Film Mfg. Co.*, recognized the antitrust implications of *Henry* and implicitly overruled *Henry's* upholding of the tying arrangement. See 243 U.S. 502, 512 (1917). Thirty-two years later, the U.S. Supreme Court in *Standard Oil Co. of California v. United States* held that tying arrangements serve hardly any purpose beyond the suppression of competition. 337 U.S. 293, 305–06 (1949). The Court backed off of this harsh treatment of tying arrangements in *Jefferson Parish*, condemning tying arrangements only when the seller has some special ability (market power) to force a purchaser to do something that he or she would not do in a competitive market. 466 U.S. at 13–14. In its most recent tying case, the U.S. Supreme Court recognized that its strong disapproval of tying arrangements had substantially diminished over the years. *Ill. Tool Works*, 547 U.S. at 35.

It is also important to note that the U.S. Supreme Court has historically examined the legality of tying arrangements using a *per se* test, by which it deems certain types of contractual arrangements unreasonable as a matter of law. *Id.* at 35–38; *Jefferson Parish*, 466 U.S. at 9; *Fortner I*, 394 U.S. at 498; *N. Pac. Ry.*, 356 U.S. at 5. But many commentators have criticized this approach because it allows the Court to forego any market analysis to determine if the tying arrangement actually restricts competition, thus allowing courts to condemn arrangements that might enhance competition or that can be justified on other grounds. See *Jefferson Parish*, 466 U.S. at 33–35 (O'Connor, J., concurring); see also 9 PHILIP E. AREEDA, ANTITRUST LAW: AN ANALYSIS OF ANTITRUST PRINCIPLES AND THEIR APPLICATION ¶ 1702 (1991) (criticizing the *per se* test because it inadequately defines “tying arrangement” and is applied in very idiosyncratic ways). Because of these considerations, this Note adopts an elemental test to place greater emphasis on the proof of market power and injury to competition. See *infra* notes 166–169 and accompanying text.

¹⁶⁶ *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish*, 466 U.S. at 21–22; *Fortner I*, 394 U.S. at 507.

uct,¹⁶⁷ (3) the tying arrangement must injure competition,¹⁶⁸ and (4) the tying arrangement must affect a substantial amount of commerce.¹⁶⁹

A. First Condition of an Illegal Tying Arrangement: The Producer Sells Two Distinct Products or Services Tied Together

The first condition requires the seller to offer two separate products, rather than two components of a single product.¹⁷⁰ This condition turns on the character of the consumer demand for the two items, not on the functional relation between them.¹⁷¹ For example, a camera and its lens are components of the same product; a camera and the film are two separate products.¹⁷² Although a camera cannot work without either the lens or the film, consumers have separate demands for the camera and the film, but a single demand for the camera with a lens, as they expect the camera to come with a lens.¹⁷³ Because the Sherman Act seeks to prevent sellers from exploiting their market power in one product by forcing a customer to purchase a separate product, this method of evaluation is appropriate because it shifts the attention away from how the products are used and toward how the two products are perceived by consumers.¹⁷⁴

Another component of the first condition requires that the seller condition the purchase of the tying product on the purchase of the tied product.¹⁷⁵ The customer only buys the tied product because he must take it in order to obtain the desired product.¹⁷⁶ Consequently, if each of the products may be purchased separately in a competitive market, one seller's decision to sell the two products in one package does not meet this condition of a tying arrangement.¹⁷⁷ There is no

¹⁶⁷ *Ill. Tool Works*, 547 U.S. at 34-38; *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish*, 466 U.S. at 13-14; *U.S. Steel Corp. v. Fortner Enters., Inc. (Fortner II)*, 429 U.S. 610, 620-22 (1977); *Fortner I*, 394 U.S. at 502-04.

¹⁶⁸ See *Ill. Tool Works*, 547 U.S. at 36-38, 45; *Jefferson Parish*, 466 U.S. at 34-35, 38-40 (O'Connor, J., concurring).

¹⁶⁹ *Ill. Tool Works*, 547 U.S. at 39; *N. Pac. Ry.*, 356 U.S. at 11; *Int'l Salt Co. v. United States*, 332 U.S. 392, 396 (1947).

¹⁷⁰ See *Jefferson Parish*, 466 U.S. at 18.

¹⁷¹ *Id.* at 19.

¹⁷² See *Eastman Kodak*, 504 U.S. at 463.

¹⁷³ See *id.* at 463; *Jefferson Parish*, 466 U.S. at 19.

¹⁷⁴ See *Jefferson Parish*, 466 U.S. at 19-21.

¹⁷⁵ See *Eastman Kodak*, 504 U.S. at 462-63; *Jefferson Parish*, 466 U.S. at 12.

¹⁷⁶ *Jefferson Parish*, 466 U.S. at 12.

¹⁷⁷ *Id.* at 11.

tying problem when the buyer is free to take either product by itself, even when the seller offers the two as a package at a single price.¹⁷⁸

B. Second Condition of an Illegal Tying Arrangement: The Producer Possesses Substantial Economic Power Over the Tying Product

The second condition of an illegal tying arrangement requires that the seller possess economic power over the tying product.¹⁷⁹ The U.S. Supreme Court has defined market power as the power to force a purchaser to do something that he or she would not do in a competitive market, or, as an economic matter, the power to raise prices above the levels that would be charged in a competitive market.¹⁸⁰ Under either definition, a seller with substantial economic power has some advantage not shared by competitors in the market for the tying product.¹⁸¹

To determine the relevant market for antitrust purposes, a court must make a factual inquiry into the "commercial realities" faced by consumers, including the choices available to consumers in the tying market.¹⁸² If there are a number of substitutes available to the consumer, competitive pressures will likely force the producer imposing a tying arrangement to lose market share or abandon its tie.¹⁸³ The tying market, however, could also consist entirely of one brand of a product as long as there are no reasonable substitutes for it.¹⁸⁴

For example, in its 1976 decision in *Fortner Enterprises v. U.S. Steel Corp. (Fortner II)*, the U.S. Supreme Court held that a defendant could possess sufficient economic power over the tying market if the tying product was unique.¹⁸⁵ The Court emphasized that uniqueness confers economic power only when other competitors are in some way prevented from offering the distinctive product themselves.¹⁸⁶ In this case, the defendant was accused of selling favorable credit (tying product) on the condition that the buyer also purchase the defendant's pre-manufactured homes (tied product).¹⁸⁷ The plaintiffs argued that the

¹⁷⁸ *N. Pac. Ry.*, 356 U.S. at 6 n.4.

¹⁷⁹ See *Eastman Kodak*, 504 U.S. at 464; *Jefferson Parish*, 466 U.S. at 13–14.

¹⁸⁰ See *Eastman Kodak*, 504 U.S. at 464; *Fortner II*, 429 U.S. at 620; *Fortner I*, 394 U.S. at 503.

¹⁸¹ See *Fortner II*, 429 U.S. at 620.

¹⁸² *Eastman Kodak*, 504 U.S. at 481–82.

¹⁸³ Troy Paredes, Comment, *Copyright Misuse and Tying: Will Courts Stop Misusing Misuse?*, 9 HIGH TECH. L.J. 271, 299 (1994).

¹⁸⁴ See *Eastman Kodak*, 504 U.S. at 481–82.

¹⁸⁵ *Fortner II*, 429 U.S. at 619–22.

¹⁸⁶ *Id.* at 621 (citing *Fortner I*, 394 U.S. at 505).

¹⁸⁷ *Id.* at 611–12.

defendant offered unique credit because its mortgage loans covered 100% of the acquisition and development cost of real estate.¹⁸⁸ No other lender in the geographic area could match these favorable terms.¹⁸⁹ Although the Court accepted the proposition that the plaintiff could base market power on the uniqueness of the defendant's tying product, the plaintiff could not prove uniqueness merely because the defendant was willing to accept a lesser profit or incur greater risks than its competitors.¹⁹⁰ To establish sufficient power over the tying product, the plaintiff needed to show that other competitors could not offer the same favorable credit rates.¹⁹¹

In another case decided in 1983, *Jefferson Parish Hospital District Number 2 v. Hyde*, the U.S. Supreme Court took a more quantitative approach to the market power condition, holding that the alleged tying arrangement did not violate Section 1 of the Sherman Act because the defendant did not possess sufficient market power over the tying product.¹⁹² There, the defendant was accused of compelling users of its hospital services (the tying product) to purchase the hospital's chosen anesthesia service (the tied product).¹⁹³ The plaintiffs argued that the defendant's hospital possessed substantial economic power because it dominated the geographic area, and most patients pick a hospital based on its proximity to their home.¹⁹⁴ Hence, the plaintiffs argued that the hospital exploited its dominance in the local area by forcing patients to purchase the hospital's chosen anesthesia service.¹⁹⁵ The Court rejected the plaintiff's argument on the grounds that the hospital's dominance over persons residing in the area was far from overwhelming, given that seventy percent of the patients in the area chose to go to other hospitals.¹⁹⁶ The hospital, in effect, had no advantage over its competitors; if they really wanted alternate anesthesia services, patients could just go to another hospital.¹⁹⁷

¹⁸⁸ *Id.* at 615-16.

¹⁸⁹ *Id.*

¹⁹⁰ *Fortner II*, 429 U.S. at 621-22.

¹⁹¹ *Id.* at 622; *Fortner I*, 394 U.S. at 505 n.2 ("[T]he real source of economic power is not the product itself but rather the seller's cost advantage in producing it.").

¹⁹² *Jefferson Parish*, 466 U.S. at 26-29.

¹⁹³ *Id.* at 8.

¹⁹⁴ *Id.* at 7-8.

¹⁹⁵ *Id.*

¹⁹⁶ *Id.* at 26.

¹⁹⁷ See *Jefferson Parish*, 466 U.S. at 26-27.

C. Third Condition of an Illegal Tying Arrangement: The Tying Arrangement Injures Competition

The third condition requires that the tying arrangement injure competition.¹⁹⁸ Whereas courts examine economic power in the tying product market, they examine the anticompetitive effect in reference to the market for the tied product.¹⁹⁹ This distinction is important because it goes to the heart of what makes a tying arrangement illegal under Section 1 of the Sherman Act.²⁰⁰ An abuse of market power through a tying arrangement can potentially injure both consumers and producers in the tied market.²⁰¹ Tying arrangements injure competition if they use the tying product's market power to force consumers to purchase the tied product not because of its merits, but because it is necessary in the purchase of the tying product.²⁰² Furthermore, the tying arrangement may take advantage of market failures arising out of a consumer's inability to adequately assess the true costs of the tied item.²⁰³ Anticompetitive effects also impact producers in the tied market who face higher barriers to entry because they are forced to overcome the attraction of the tying product in addition to competing on the merits of the tied product.²⁰⁴

¹⁹⁸ See *Ill. Tool Works*, 547 U.S. at 36–38, 45; *Jefferson Parish*, 466 U.S. at 33–35, 38–40 (O'Connor, J., concurring). Under this inquiry, it is appropriate to look at possible pro-competitive justifications for the tying arrangement, in addition to the anticompetitive effects. *Jefferson Parish*, 466 U.S. at 33–35.

¹⁹⁹ See *Jefferson Parish*, 466 U.S. at 14.

²⁰⁰ See *id.*

²⁰¹ See *id.* at 14–15.

²⁰² See *id.* at 14.

²⁰³ See Grimes, *supra* note 154, at 267–68. The Chicago School argues that a tying arrangement rarely injures competition because it is the equivalent of a price increase on the tying good. See Whinston, *supra* note 161, at 837–38 (summarizing the positions of Chicago School commentators). Consumers, when deciding to purchase the tying good, can factor the undesirable characteristics of the tied good into their decision. See *id.* Hence, any additional profits earned by the seller through the imposition of a tie are offset by the losses that occur when a consumer decides not to purchase the tying good because of its high “price.” See *id.* This argument stands as long as consumers are able to accurately assess the costs of the tied good. See Grimes, *supra* note 154, at 272–75. When information costs are high, consumers may not be able to make this assessment accurately, and, thus, they make a less than optimal decision, which sellers can exploit through the tying arrangement. *Id.*

²⁰⁴ See *Fortner I*, 394 U.S. at 512–14 (White, J., dissenting).

D. *Fourth Condition of an Illegal Tying Arrangement: Tying Arrangement Affects a Substantial Volume of Commerce*

The final condition requires that the tying arrangement affect a substantial volume of trade.²⁰⁵ As the Court in *Jefferson Parish* held, "If only a single purchaser were 'forced' with respect to the purchase of a tied item, the resultant impact on competition would not be sufficient to warrant the concern of antitrust law."²⁰⁶ Thus, to determine whether a tying arrangement affects a substantial volume of trade, a court must examine the amount of business foreclosed to competitors of the tied product.²⁰⁷ In its 1969 decision in *Fortner Enterprises v. U.S. Steel (Fortner I)*, the U.S. Supreme Court found that the foreclosure of \$9.1 million in total sales over three years was more than enough to support the conclusion that the tying arrangement affected a substantial volume of trade.²⁰⁸ In reaching its holding, the Court emphasized that the policy of promoting free and open competition should guide the inquiry.²⁰⁹ A tying arrangement meets this condition as long as it forecloses a substantial amount of business to exceed a *de minimis* standard, thus affecting an unreasonable amount of commerce.²¹⁰

In sum, illegal tying arrangements occur when producers exploit their power in the tying good market to force consumers to purchase a tied product, a transaction which injures competition in the tied market.²¹¹ Framing tying arrangements in this way accounts for the harms to consumers, who make a less than optimal choice on the tied good, and producers in the tied market, who must overcome the attraction of the tying good in addition to regular competition on the merits.²¹² Furthermore, it emphasizes the importance of anticompetitive effects in order to distinguish benign tying arrangements from those that violate Section 1 of the Sherman Act.²¹³

²⁰⁵ *Ill. Tool Works*, 547 U.S. at 39; *N. Pac. Ry.*, 356 U.S. at 11; *Int'l Salt*, 332 U.S. at 396.

²⁰⁶ *Jefferson Parish*, 466 U.S. at 16.

²⁰⁷ *Fortner I*, 394 U.S. at 501.

²⁰⁸ See *id.* at 502.

²⁰⁹ See *id.* at 501-02.

²¹⁰ *Id.*

²¹¹ See *Eastman Kodak*, 504 U.S. at 464; *Jefferson Parish*, 466 U.S. at 12; *Fortner I*, 394 U.S. at 512-13 (White, J., dissenting).

²¹² See *Jefferson Parish*, 466 U.S. at 12-14; *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Brodley, *supra* note 150, at 1032-35; Lande, *supra* note 158, at 93-96; Meese, *supra* note 146, at 16.

²¹³ See *Ill. Tool Works*, 547 U.S. at 36-38, 45; *Jefferson Parish*, 466 U.S. at 34-35, 38-40 (O'Connor, J., concurring).

IV. THE DMCA AND THE IPHONE: LITTLE HOPE FOR CONSUMERS

When George Hotz first unlocked the iPhone, it seemed like a victory for consumers, an escape from the confines of a rigid business model that limited iPhone purchasers to the AT&T network.²¹⁴ Moreover, it appeared to validate consumer rights under the Digital Millennium Copyright Act (the "DMCA").²¹⁵ Although the DMCA was meant to prevent consumers from circumventing technological devices to access copyrighted works, the Librarian of Congress explicitly granted an exemption for those who, like Hotz, circumvented "for the sole purpose of lawfully connecting to a wireless telephone communication network."²¹⁶ The federal regulation seemed to affirm the right of consumers to unlock their iPhones.²¹⁷

In reality, however, the DMCA provides little hope for consumers in their quest to break free from AT&T.²¹⁸ The wireless connection exemption is severely limited as a legal weapon because it can only be raised as a defense to copyright infringement, and it only applies to individuals who circumvent copyright protection technology on their own and not to those who help others circumvent such technology.²¹⁹ Furthermore, the case law interpreting the DMCA is ambiguous as to whether consumers can legally unlock their phones.²²⁰ This Part will examine each of these limitations in turn.

A. Structural Limitations of the DMCA and the Wireless Connection Exemption

The structure of the DMCA provides two major obstacles to iPhone purchasers who hope to use the wireless connection exemption to justify unlocking a cell phone.²²¹ First, the purchaser can only

²¹⁴ See Granick, *supra* note 5; Stone, *supra* note 6.

²¹⁵ See Pub. L. No. 105-304, 112 Stat. 2860 (1998) (codified as amended in scattered sections of 17 U.S.C.); Librarian Rulemaking, 71 Fed. Reg. 68,472, 68,476 (proposed Nov. 27, 2006) (to be codified at 37 C.F.R. pt. 201); Wu, *supra* note 5.

²¹⁶ See *Chamberlain Group v. Skylink Techs., Inc.*, 381 F.3d 1178, 1192-96 (Fed. Cir. 2004); S. REP. No. 105-190, at 11 (1998); Librarian Rulemaking, 71 Fed. Reg. at 68,476; *supra* notes 83-102 and accompanying text.

²¹⁷ See Librarian Rulemaking, 71 Fed. Reg. at 68,476; Copyright Register Recommendation, *supra* note 105, at 48-52.

²¹⁸ See Granick, *supra* note 5 (noting the ambiguities in applying the DMCA to cell phone unlocking).

²¹⁹ See 17 U.S.C. § 1201(a) (2000); *infra* notes 221-235 and accompanying text.

²²⁰ See *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 547-50 (6th Cir. 2004); *Chamberlain*, 381 F.3d at 1200-04; *TracFone Wireless, Inc. v. Dixon*, 475 F. Supp. 2d 1236, 1238 (M.D. Fla. 2007); *infra* notes 236-250 and accompanying text.

²²¹ See 17 U.S.C. § 1201(a); Granick, *supra* note 5.

raise the exemption as a defense to circumvention, which means that consumers cannot simply demand that Apple and AT&T allow them to bypass the Subscriber Identity Module ("SIM") card lock that binds them to the AT&T network.²²² Section 1201(a)(1)(A) provides a blanket prohibition on circumvention of technological measures that control access to copyrighted works, and § 1201(a)(1)(C) authorizes the Librarian of Congress to determine exceptions to that blanket prohibition, namely whether that prohibition adversely impacts individuals' "ability to make noninfringing uses under this title of a particular class of copyrighted works."²²³ Section 1201(a)(1)(C) does not authorize the Librarian to bar certain technological measures, but rather to allow certain kinds of circumvention.²²⁴ Consequently, when the Librarian of Congress decided that individuals could make noninfringing use of the "firmware that enables wireless telephone handsets to connect to a wireless telephone communication network," she only meant to allow circumvention of the software locks that controlled access to the firmware.²²⁵ The DMCA did not authorize her to declare unlawful the use of those locks.²²⁶

This distinction is important in the case of the iPhone.²²⁷ The Librarian's exemption may allow consumers to circumvent the iPhone lock, but it does not prevent Apple and AT&T from initially using those locks, which is what has led to the 'cat and mouse' game referred to by Steve Jobs.²²⁸ Hackers will continue to unlock their iPhones, and Apple will repeatedly disable unlocking software with new security updates.²²⁹ Consumers, therefore, cannot take full advantage of their right to circumvent, despite the Librarian's determination that cell phone locks

²²² See 17 U.S.C. § 1201(a).

²²³ See *id.*

²²⁴ See *id.* § 1201(a)(1)(C); Librarian Rulemaking, 71 Fed. Reg. at 68,472 ("The purpose of the rulemaking proceeding conducted by the Register is to determine whether users of particular classes of copyrighted works are, or in the next three years are likely to be, adversely affected by the prohibition in their ability to make noninfringing uses of copyrighted works.").

²²⁵ Librarian Rulemaking, 71 Fed. Reg. at 68,476.

²²⁶ See 17 U.S.C. § 1201(a)(1)(C).

²²⁷ See *id.*; Librarian Rulemaking, 71 Fed. Reg. at 68,476; Netanel, *supra* note 17, at 87-88; Keizer, *Apple Plays Hardball*, *supra* note 8.

²²⁸ See 17 U.S.C. § 1201(a); Librarian Rulemaking, 71 Fed. Reg. at 68,476; Netanel, *supra* note 17, at 87-88; Keizer, *Apple Plays Hardball*, *supra* note 8.

²²⁹ See Keizer, *Apple Plays Hardball*, *supra* note 8; Keizer, *iPhone Unlock Hackers*, *supra* note 11. This Note does not attempt to decide whether hackers face contractual obligations that might limit their ability to alter their iPhones, but, for further information, see generally *supra* note 20 and accompanying text for a list of articles that do address the enforceability of contracts with regard to copyright law.

are access controls that have nothing whatsoever to do with the interests protected by copyright.²³⁰

The second major obstacle facing those wishing to unlock their iPhones is that the exemption applies only to individual circumventers.²³¹ The second part of the anticircumvention provision, § 1201(a)(2)(A), explicitly states that no person can “manufacture, import, offer to the public, provide, or otherwise traffic in any technology, product, service, device, component, or part thereof that . . . is primarily designed or produced for the purpose of circumventing” an access control.²³² Unlike § 1201(a), there are no exceptions to this prohibition.²³³ Hence, the exemption allows George Hotz to unlock his iPhone, but does not exempt him from liability for telling others how to do it.²³⁴ The average consumer lacking a technical background has little chance of unlocking his iPhone when those with software experience cannot legally share their knowledge.²³⁵

B. *Limitations of Applying DMCA Case Law to the Unlocking of the iPhone*

Although software developers who publicize the methods for unlocking iPhones may not qualify under the wireless connection exemption, they could still argue that they trafficked in circumvention technologies that did not violate the DMCA.²³⁶ Indeed, both *Lexmark International, Inc. v. Static Control Components, Inc.* and *Chamberlain Group, Inc. v. Skylink Technologies, Inc.* rejected plaintiffs' claims under the DMCA even though the defendants in each case trafficked in cir-

²³⁰ Librarian Rulemaking, 71 Fed. Reg. at 68,476; *supra* notes 99–102, 106–109 and accompanying text. This result is expected given that the primary purpose of the DMCA is to give producers a weapon to fight off circumvention in order to encourage them to distribute movies, music, software, and other copyrighted works in the digital format. See S. REP. NO. 105-190, at 1–2, 8–9; Netanel, *supra* note 17, at 84–85, 92. With this as the main focus, the DMCA restricts the rights of consumers and can be used by producers to achieve ends unrelated to copyright law. See Burk, *Anticircumvention*, *supra* note 103, at 1095–97; McCardle, *supra* note 93, at 997–99.

²³¹ See 17 U.S.C. § 1201(a); Librarian Rulemaking, 71 Fed. Reg. at 68,472; Granick, *supra* note 5.

²³² 17 U.S.C. § 1201(a)(2)(A); *Universal City Studios, Inc. v. Corley*, 273 F.3d 429, 441–44, 459–60 (2d Cir. 2001) (upholding lower court's injunction that barred defendant from posting on an Internet website a method for circumventing a technological protection measure that restricted DVDs from working on the Linux operating system).

²³³ See 17 U.S.C. § 1201(a)(2); Granick, *supra* note 5.

²³⁴ See 17 U.S.C. § 1201(a)(2); *Universal City Studios*, 273 F.3d at 441–44, 459–60; Granick, *supra* note 5.

²³⁵ Granick, *supra* note 5.

²³⁶ See Netanel, *supra* note 17, at 91–92; Granick, *supra* note 5.

cumvention technologies.²³⁷ The U.S. Court of Appeals for the Sixth Circuit in *Lexmark* and the U.S. Court of Appeals for the Federal Circuit in *Chamberlain* refused to allow the producers to exploit the DMCA by embedding copyrighted software within access controls to prevent their products from being used in conjunction with competing products.²³⁸ That said, each defendant in those cases won on the ground that the purchase of the products authorized circumvention.²³⁹ Unlike the plaintiffs in *Lexmark* and *Chamberlain*, Apple and AT&T did not authorize circumvention of the cell phone lock.²⁴⁰ Rather, they made it clear from the outset that purchasers of the iPhone can only use the device on the AT&T network.²⁴¹ In this way, Apple and AT&T did what Judge Merritt and other commentators feared: they tweaked the way they sold a product so that they could sustain a cause of action under the DMCA.²⁴²

Hotz and other individuals offering circumventing technologies could argue that the SIM card lock is not a protected work under § 1201(a)(2)(A) and that the DMCA therefore does not apply to them.²⁴³ Congress intended the DMCA to prohibit piracy of copyright-protected works such as movies, music, and computer programs.²⁴⁴ The mobile firmware within the iPhone's SIM card that allows users to connect to a cellular network may qualify as a copyright protected work, but Hotz and other unlockers have not circumvented the access control

²³⁷ See *Lexmark*, 387 F.3d at 549–50; *Chamberlain*, 381 F.3d at 1202; *supra* notes 117–136 and accompanying text.

²³⁸ See *Lexmark*, 387 F.3d at 549–50 (holding that the defendant did not violate § 1201(a)(2) by circumventing the microchip that controlled access to software in the plaintiff's printers); *Chamberlain*, 381 F.3d at 1193, 1201–02 (holding that the defendant did not violate § 1201(a)(2) by trafficking in competing garage door opener transmitters that circumvented the technological protection measure controlling access to the plaintiff's garage door opening device).

²³⁹ See *Lexmark*, 387 F.3d at 546; *Chamberlain*, 381 F.3d at 1202.

²⁴⁰ iPhone Terms and Conditions, *supra* note 3; Wu, *supra* note 5.

²⁴¹ See *Lexmark*, 387 F.3d at 546, 549–50; *Chamberlain*, 381 F.3d at 1202; Wu, *supra* note 5 (explaining that, when a consumer begins to use an iPhone, he or she agrees, via an on-screen contract, that "except as . . . permitted by applicable law you may not . . . reverse engineer, [or] disassemble . . . the iPhone Software"); iPhone Terms and Conditions, *supra* note 3 ("All plans require a 2-year AT&T service agreement, an activation fee, and are subject to AT&T credit approval.").

²⁴² See *Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1201; McCardle, *supra* note 93, at 1017–18; *supra* notes 128, 142 and accompanying text.

²⁴³ See 17 U.S.C. § 1201(a)(2)(A); *Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1193, 1197–1202.

²⁴⁴ See *Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1197–1202; S. REP. NO. 105-190, at 1–2, 8–9; Librarian Rulemaking, 71 Fed. Reg. at 68,476; Netanel, *supra* note 17, at 77; *supra* notes 83–92 and accompanying text.

protecting the firmware in order to *pirate* it.²⁴⁵ They circumvented the access control to utilize the mobile firmware to access alternate wireless carriers, much like the defendant in *Chamberlain* circumvented the access control to utilize embedded software to allow other garage door transmitters to work with the plaintiff's garage door opener.²⁴⁶

A court applying the DMCA to iPhone unlocking could reach the same conclusion Judge Merritt did in his concurring opinion in *Lexmark*.²⁴⁷ As Judge Merritt observed, the defendant did not circumvent to pirate the plaintiff's copyrighted software, but rather to sell print cartridges that could work with the plaintiff's printers.²⁴⁸ If the plaintiff wanted to rely on the DMCA to protect its copyrighted works, therefore, it should not have used such works to prevent competing cartridges from working with its printers.²⁴⁹ Similarly, if Apple and AT&T want to rely on DMCA protections, they should not use the mobile firmware in the SIM card to prevent the iPhones from working with competing carriers.²⁵⁰

V. ILLEGAL TYING ARRANGEMENTS: BETTER CLAIM FOR IPHONE UNLOCKERS

Although consumers cannot rely on copyright law to stop Apple from including technological protection on the mobile firmware inside

²⁴⁵ See *Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1193, 1197–98, 1201; Librarian Rulemaking, 71 Fed. Reg. at 68,476; Granick, *supra* note 5.

²⁴⁶ See *Chamberlain*, 381 F.3d at 1201; Granick, *supra* note 5.

²⁴⁷ See *Lexmark*, 387 F.3d at 551–52 (Merritt, J., concurring).

²⁴⁸ *Id.*

²⁴⁹ *Id.* at 552.

²⁵⁰ See *id.* In its 2007 decision in *TracFone Wireless, Inc. v. Dixon*, the U.S. District Court for the Middle District of Florida may have provided some hope to iPhone unlockers, but the ultimate impact of that case is still ambiguous. See 475 F. Supp. 2d at 1238. In that case, the court held that the wireless connection exemption did not apply because the defendants unlocked prepaid phones to sell them for a profit, not for the *sole purpose* of lawfully connecting to a competing network. *Id.* This holding seems to imply that the court would have allowed the circumvention had the defendants not sold the phones for a profit, thus providing legal support to consumers who unlock their iPhones for their own personal use. See *id.* But, the court mistakenly overlooked the real reason the Librarian of Congress inserted the phrase “sole purpose” into the exemption, namely to prevent circumvention of technological measures that protected both mobile firmware and the copyrighted digital media downloaded onto cell phones. See *id.*; Librarian Rulemaking, 71 Fed. Reg. at 68,476. Whereas the Librarian of Congress was concerned with the piracy of digital media, the District Court of Florida was concerned with the defendants’ selling the prepaid phones at a premium and interfering with the plaintiff’s business model. See *TracFone*, 475 F. Supp. 2d at 1238; Librarian Rulemaking, 71 Fed. Reg. at 68,476. Hence, the court relied on an injury to the plaintiff that falls outside the realm of copyright law, making it possible that a court could do the same in the case of the iPhone. Cf. *TracFone*, 475 F. Supp. 2d at 1238.

the iPhone, they can challenge the underlying business arrangement between Apple and AT&T under antitrust law.²⁵¹ Both the U.S. Courts of Appeals for the Sixth Circuit and for the Federal Circuit hinted at the antitrust implications of using the Digital Millennium Copyright Act (the "DMCA") to restrict competition in secondary markets.²⁵² *Chamberlain* even cited an antitrust case for the proposition that the DMCA, if strictly interpreted, could allow a company to leverage its sales into aftermarket monopolies, a practice normally prohibited by antitrust laws.²⁵³ Testing the validity of this fear, however, requires a careful examination of illegal tying arrangements.²⁵⁴ This Part will argue that Apple and AT&T have formed an illegal tying arrangement by conditioning the purchase of the iPhone (tying product) on the agreement that the phone will only operate using AT&T's cellular service (tied product).²⁵⁵

A. First Condition of an Illegal Tying Arrangement: Apple Sells Two Distinct Products or Services Tied Together

iPhone consumers meet the first condition of an illegal tying arrangement because two separate products—the iPhone and AT&T's wireless service—are tied together.²⁵⁶ Cell phones and cell phone service represent two distinct markets in the eyes of consumers, such that

²⁵¹ See 15 U.S.C. § 1 (2006); *Eastman Kodak Co. v. Image Technical Servs., Inc.*, 504 U.S. 451, 464–66, 472–77 (1992); *Jefferson Parish Hosp. Dist. No. 2 v. Hyde*, 466 U.S. 2, 9–12 (1984); *In re Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d 403, 414–16, 419–20 (S.D.N.Y. 2005); *Holman Complaint*, *supra* note 12, ¶¶ 76–97, at 17–22; *Smith Complaint*, *supra* note 12, ¶¶ 61–81, at 25–29.

²⁵² See *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 551–52 (6th Cir. 2004) (Merriitt, J., concurring); *Chamberlain Group, Inc. v. Skylink Techs., Inc.*, 381 F.3d 1178, 1201 (Fed. Cir. 2004).

²⁵³ *Chamberlain*, 381 F.3d at 1201 (citing *Eastman Kodak*, 504 U.S. at 455 for the proposition that the DMCA, if strictly interpreted, could allow virtually any company to attempt to leverage its sales into aftermarket monopolies, a practice that the antitrust laws normally prohibit).

²⁵⁴ See *id.* Although the Federal Circuit in *Chamberlain* acknowledged the antitrust issues implicated by the DMCA, the court, understandably, did not examine the conditions that make tying arrangements illegal, an analysis which requires more than just an "attempt to leverage its sales into aftermarket monopolies." See *id.*; see also *Jefferson Parish*, 466 U.S. at 9–12 (providing an overview of the tying analysis and stating that not all tying arrangements are anticompetitive); *Chamberlain*, 381 F.3d at 1201.

²⁵⁵ See *Eastman Kodak*, 504 U.S. at 461; *N. Pac. Ry. Co. v. United States*, 356 U.S. 1, 5–6 (1958).

²⁵⁶ See *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish*, 466 U.S. at 19–22; *Fortner Enters., Inc. v. U.S. Steel Corp.* (*Fortner I*), 394 U.S. 495, 507 (1969); *supra* notes 170–178 and accompanying text.

there is sufficient demand for cell phone service separate from the demand for handsets.²⁵⁷ Cellular service companies conceded this when consumers sued them for illegally tying service to handsets.²⁵⁸

Independent of that that concession, iPhone purchasers still have sufficient proof to satisfy this condition, particularly given the U.S. Supreme Court's 1992 decision in *Eastman Kodak Co. v. Image Technical Services, Inc.*, where the Court held that replacement parts and repair service for printers constituted two separate markets, even though the two products were functionally linked.²⁵⁹ In that case, the printer manufacturer argued that because there was no demand for parts separate from service, there cannot be separate markets for service and parts.²⁶⁰ The Court rejected that argument because it would force the Court to conclude that separate markets could never exist for cameras and film, computers and software, or automobiles and tires.²⁶¹

Likewise, the iPhone may depend on cellular service to function, but consumers can still distinguish between the market for cell phones and the market for cell phone service.²⁶² That consumers have gone through the trouble of unlocking their iPhones demonstrates that they demand cell phones separately from service.²⁶³ Moreover, the recent announcements by Verizon and AT&T that they have opened their networks to all handsets show that consumers distinguish between the handset and service markets.²⁶⁴ In addition to showing that cell phones and cell phone service occupy two different markets, iPhone consumers also meet the first condition of an unlawful tying arrangement because Apple mandates the use of the iPhone on AT&T's network.²⁶⁵

²⁵⁷ See *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish*, 466 U.S. at 19–22; *A Cellular Sea Change*, *supra* note 36 (explaining how Verizon has chosen to open its networks to other cell phones); Wu, *supra* note 5.

²⁵⁸ See Memorandum of Law in Support of Defendant's Consolidated Motion to Dismiss the Complaint at 12, *Wireless Consumer Alliance, Inc. v. AT&T Cellular Servs. Inc.*, 385 F. Supp. 2d 403, (S.D.N.Y. 2005) (No. 02 Civ. 2637).

²⁵⁹ See *Eastman Kodak*, 504 U.S. at 462–63.

²⁶⁰ *Id.*

²⁶¹ See *id.* at 463.

²⁶² See *id.* at 462; *Jefferson Parish*, 466 U.S. at 21–22; *A Cellular Sea Change*, *supra* note 36; Wu, *supra* note 5.

²⁶³ See *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish*, 466 U.S. at 21–22; Stone, *supra* note 6; Wu, *supra* note 5.

²⁶⁴ See *Eastman Kodak*, 504 U.S. at 462; *Jefferson Parish*, 466 U.S. at 21–22; *A Cellular Sea Change*, *supra* note 36; Cauley, *supra* note 40.

²⁶⁵ Smith Complaint, *supra* note 12, ¶¶ 3–5, 28, at 2, 6; Wu, *supra* note 5; iPhone Terms and Conditions, *supra* note 3.

B. *Second Condition: Apple Possesses Substantial Economic Power in the Market for the iPhone*

Consumers also have a legitimate claim that Apple possesses substantial economic power in the market for the iPhone because it is the only producer of the revolutionary device.²⁶⁶ Although it could be considered just another cell phone or even another smart phone, the iPhone transcends both of these labels and occupies a market of its own.²⁶⁷ It is more than a phone.²⁶⁸ It is a digital multimedia player, Internet browser, and organizer.²⁶⁹ Moreover, no other phone has matched the iPhone's sleek beauty, earning *Time Magazine's* praise as invention of the year.²⁷⁰ Of course, none of this praise matters to the analysis of market power unless it comes from consumers.²⁷¹ But, the fact that 1.4 million iPhones sold in its first three months on the market, at the hefty price tag of \$599, is proof that consumers find the product truly unique.²⁷²

The crucial question is whether this uniqueness actually confers sufficient economic power under the U.S. Supreme Court's test for condemning tying arrangements.²⁷³ The Court in its 1984 decision in *Jefferson Parish Hospital District Number 2 v. Hyde* held that a defendant possesses substantial power over the tying product when it can force purchasers to do something that they would not do in a competitive market, a test that is easily met in the case of the iPhone.²⁷⁴ In addition to compelling millions of consumers to fork over hundreds of dollars for a phone when most other phones sell for much less, Apple also forced consumers to accept a two-year service contract with AT&T, an obligation that has disappointed many consumers.²⁷⁵ Although the existence of the tie, in itself, cannot prove market power over the tying product, it is further evidence supporting the consum-

²⁶⁶ See *Eastman Kodak*, 504 U.S. at 464; *Jefferson Parish*, 466 U.S. at 13-18; *U.S. Steel Corp. v. Fortner Enters., Inc. (Fortner II)*, 429 U.S. 610, 620 (1977); *Fortner I*, 394 U.S. at 505; Paredes, *supra* note 183, at 299; *supra* notes 179-191 and accompanying text.

²⁶⁷ See Grossman, *supra* note 60, at 60; Mossberg, *BlackJack*, *supra* note 60; Vogelstein, *supra* note 27, at 122, 125; *supra* notes 60-71 and accompanying text.

²⁶⁸ See Grossman, *supra* note 60, at 60; Mossberg, *BlackJack*, *supra* note 60; Vogelstein, *supra* note 27, at 122, 125.

²⁶⁹ Apple iPhone, <http://www.apple.com/iphone> (last visited Apr. 2, 2008).

²⁷⁰ Grossman, *supra* note 60, at 60; Mossberg, *BlackJack*, *supra* note 60.

²⁷¹ See *Eastman Kodak*, 504 U.S. at 482; Paredes, *supra* note 183, at 299.

²⁷² See Garrity, *supra* note 68; Graham, *iPhone's Future*, *supra* note 68.

²⁷³ See *Jefferson Parish*, 466 U.S. at 13-14, 17, 27; *Fortner II*, 429 U.S. at 620-22.

²⁷⁴ See *Jefferson Parish*, 466 U.S. at 13-14, 17, 27.

²⁷⁵ See iPhone Terms and Conditions, *supra* note 3; see also *supra* note 72 and accompanying text.

ers' claim that the lure of the iPhone was too strong to resist.²⁷⁶ John Canning, for example, purchased an iPhone even though AT&T offers no wireless service in his home state of Vermont.²⁷⁷

Canning may have acted irrationally in his purchase of the iPhone, but that does not detract from consumers' claims that Apple possesses substantial economic power, as the "commercial realities" faced by consumers are what matter when assessing market power.²⁷⁸ Certainly, courts must be careful not to condemn tying arrangements when the plaintiff has only proven market power in some abstract sense, but that outcome is not likely with the iPhone.²⁷⁹ Even if the relevant market is expanded to include other smart phones, the iPhone still possesses a uniqueness that satisfies the U.S. Supreme Court's definition of market power.²⁸⁰ In 1977, the Court held in *Fortner Enterprises v. U.S. Steel Corp. (Fortner II)* that the plaintiff could prove market power based on the uniqueness of the tying product offered by the defendant, as long as the plaintiff could show that the uniqueness derived from some cost advantage not available to competitors.²⁸¹ Apple has an advantage that no other competitor can match: it can authorize the iPhone to play music or videos from Ap-

²⁷⁶ See *Jefferson Parish*, 466 U.S. at 25–27.

²⁷⁷ Silverman, *supra* note 4.

²⁷⁸ See *Eastman Kodak*, 504 U.S. at 481–82 (quoting *United States v. Grinnell Corp.*, 384 U.S. 563, 572 (1966)); *Jefferson Parish*, 466 U.S. at 13–14, 17; *Fortner II*, 429 U.S. at 620; *Fortner I*, 394 U.S. at 503–04; Paredes, *supra* note 183, at 299.

²⁷⁹ See 466 U.S. at 26–27. In *Jefferson Parish*, the Court held that a 30% market share in the tying market was not enough, absent other evidence, to prove market power over the tying product. See *id.* Although the most recent analysis of the smart phone market shows that the iPhone has obtained a 27% market share, that does not necessarily mean that consumers cannot prove Apple has market power over the tying product. See *id.* at 17. As the Court in *Jefferson Parish* further explained, market power can be proved either by showing that the seller's share of the market is high or that the seller offers a unique product that competitors are unable to offer. See *id.* The most recent U.S. Supreme Court decision on tying, *Illinois Tool Works, Inc. v. Independent Ink, Inc.*, does not affect consumer's ability to prove market power through the unique product test, even though it overruled a long-standing presumption that a patent on the tying product confers sufficient market power. 547 U.S. 28, 31 (2006). The Court may be moving away from presuming market power without rigorous market analysis, but a plaintiff should still be able to prove market power by showing that the tying product has no reasonable substitutes. See *id.*; *Fortner II*, 429 U.S. at 622. Furthermore, there is no need to rule out the possibility that the iPhone will eventually dominate the smart phone market, given that it took over 27% of the market in just three months, and given that sales are expected to continue to grow at unprecedented rates. See Garrity, *supra* note 68; Vaughn, *supra* note 69.

²⁸⁰ See *Fortner II*, 429 U.S. at 620–22.

²⁸¹ See *id.*

ple's iTunes Music Store.²⁸² This is important because Apple's iTunes Music Store dominates the market for downloadable digital music.²⁸³ Any consumer looking to buy a new cell phone with media capabilities will likely look for the one phone that is compatible with his or her library of downloads and can download songs directly from iTunes.²⁸⁴ The iPhone is the only smart phone that qualifies.²⁸⁵

C. Third Condition: The Tying of the iPhone to AT&T's Cellular Service Results in Anticompetitive Effects in the Market for Cellular Service

By conditioning the purchase of the iPhone on the acceptance of a service contract with AT&T, Apple and AT&T have injured competition in the cellular service market, harming both consumers and producers.²⁸⁶ On the consumer side, the two companies have forced iPhone purchasers to make a less than optimal buying decision regarding their cellular service.²⁸⁷ Consumers have made it emphatically clear that they are disappointed with AT&T's service.²⁸⁸ In a freely competitive market where the iPhone tying arrangement did not exist, many consumers would have chosen AT&T's competitor on the GSM network, T-Mobile, evidenced by the fact that consumers have invested so much time unlocking the iPhone and risking its disablement.²⁸⁹ Furthermore, consumers have a viable argument that Apple

²⁸² See *id.*; *Smith Complaint*, *supra* note 12, ¶ 34, at 7; Vogelstein, *supra* note 27, at 123–24; *supra* notes 62–63 and accompanying text. The Motorola ROKR can play songs from iTunes but can only play up to 100 songs, whereas the iPhone can hold thousands of songs in its 8 gigabyte version. Vogelstein, *supra* note 27, at 123–24.

²⁸³ *Smith Complaint*, *supra* note 12, ¶ 34, at 7; Netanel, *supra* note 17, at 78; Quinn, *supra* note 4.

²⁸⁴ See Imrie, *supra* note 77 (quoting one customer expressing her desire for the iPhone because it contains all the capabilities of an iPod); Vogelstein, *supra* note 27, at 124.

²⁸⁵ *Smith Complaint*, *supra* note 12, ¶ 34, at 7; Netanel, *supra* note 17, at 79–80.

²⁸⁶ See *Eastman Kodak*, 504 U.S. at 477–78; *Jefferson Parish*, 466 U.S. at 11–14; *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Brodley, *supra* note 150, at 1032–35; Lande, *supra* note 158, at 93–96; Meese, *supra* note 146, at 16; *supra* notes 198–204 and accompanying text.

²⁸⁷ See *Jefferson Parish*, 466 U.S. at 12; *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Grimes, *supra* note 154, at 272–75.

²⁸⁸ See Grossman, *supra* note 60, at 60; Quinn, *supra* note 4; Samavati, *supra* note 72; Silverman, *supra* note 4; *supra* notes 75–76 and accompanying text. In general, AT&T has developed a reputation of dropping too many calls and providing a slow data network, two factors that certainly helped it achieve the second-to-last spot on a customer satisfaction ranking of the wireless service industry. See Grossman, *supra* note 60, at 60; Quinn, *supra* note 4; Samavati, *supra* note 72; Silverman, *supra* note 4.

²⁸⁹ See *Smith Complaint*, *supra* note 12, ¶¶ 38–42, at 9; Grossman, *supra* note 60, at 60; Quinn, *supra* note 4, at 3; Samavati, *supra* note 72; Wu, *supra* note 5.

could have brought the iPhone to market without its revenue sharing arrangement with AT&T.²⁹⁰ With purchasers lining up at stores to pay for the product and not the service, it appears that Apple could have done just as well without tying consumers to AT&T's service.²⁹¹

Consumers could also argue that the iPhone tying arrangement injured competition by exploiting consumers' lack of information.²⁹² Although they could have invested time and money comparing various cellular providers before purchasing the iPhone, consumers still had no way of accurately assessing the true costs of AT&T's service at the time of sale, given that cellular service is an "experience good" that the consumer must purchase in order to assess its quality.²⁹³ The consumers' purchase of the iPhone, therefore, was much like the purchase of the defendants' printers in *Eastman Kodak Co. v. Image Technical Services, Inc.*, where the U.S. Supreme Court condemned the defendant's tying arrangement on the grounds that it took advantage of buyers' high information costs.²⁹⁴ In that case, the buyers did not know that the defendant would eventually force the buyers to pur-

²⁹⁰ See Peters, *supra* note 1. One of the critiques of the U.S. Supreme Court's condemnation of tying arrangements is that tying arrangements can sometimes facilitate price discrimination, which has the procompetitive effect of allowing the seller to increase output of the tying product by offering it at a lower price. See Meese, *supra* note 146, at 27–28. In some sense, cellular service providers made this argument when they defended the practice of packaging service with handsets by arguing that the packaging subsidizes the cost of cell phones, so that lower income consumers have an easier time purchasing phones. See *Wireless Tel. Servs. Antitrust Litig.*, 385 F. Supp. 2d at 410; Hahn et al., *supra* note 28, at 418–20. In the case of the iPhone, however, Apple's revenue sharing agreement with AT&T may have provided further incentive to develop the revolutionary device and then sell it at a more affordable level. See Peters, *supra* note 1 (describing how consumers waited in line for the iPhone). Given the fact that customers were waiting in line to purchase the product at a \$599 price tag, it appears that Apple had adequate incentive to release the iPhone with or without AT&T's help. See *id.*

²⁹¹ See Graham, *iPhone Mania*, *supra* note 61.

²⁹² See *supra* notes 154–157 and accompanying text.

²⁹³ See Grimes, *supra* note 154, at 273 (defining an experience good as one that the consumer must purchase and experience before assessing). Of course, all cell phone service contracts are experience goods, but it is much easier for a consumer to get out of a regular service contract they do not like than it is for an iPhone purchaser to get out of their contract with AT&T because the iPhone purchaser has made a substantial investment in the device, which will only work on AT&T's service for at least five more years. See Grimes, *supra* note 154, at 273–74; Netanel, *supra* note 17, at 79–80. Consequently, markets for experience goods may be competitive on their own because consumers can free themselves from an undesirable choice and go to another competitor. See Grimes, *supra* note 154, at 273–74. But when the experience good is tied to a product like the iPhone, the market for the experience good may not be competitive because consumers are locked into their less-than-optimal choices. See *id.*

²⁹⁴ See *Eastman Kodak*, 504 U.S. at 473–74; *supra* note 154 and accompanying text.

chase repair services from the defendant, rather than going to cheaper independent service organizations.²⁹⁵ With the iPhone, consumers may have known that AT&T was the exclusive service provider, but they did not know how bad the service would be.²⁹⁶ This might ultimately hurt iPhone sales in the long run as consumers may stop buying it because of AT&T's poor service, but that still does not justify why millions of consumers are now locked in for succumbing to the lure of the iPhone.²⁹⁷

These less than optimal decisions ultimately end up hurting AT&T's competitors in the cell phone service market.²⁹⁸ In an industry where there are already high barriers to entry, AT&T's exclusive deal with Apple has made it even harder for new firms to enter the market because they not only have to compete on the merits of their cellular service, but they also have to overcome the attraction of the iPhone.²⁹⁹ AT&T, on the other hand, does not have to worry about improving its service, as its revenues rise with each new iPhone customer.³⁰⁰ Although

²⁹⁵ See *Eastman Kodak*, 504 U.S. at 455, 473–78; *PSI Repair Servs., Inc. v. Honeywell, Inc.*, 104 F.3d 811, 820 (6th Cir. 1997).

²⁹⁶ See Grimes, *supra* note 154, at 273–74; Silverman, *supra* note 4, at 4B. Again, this is based on the argument that consumers were overcome by their attraction to the iPhone and therefore did not take the time to adequately assess the quality of AT&T's service, resulting in an anticompetitive harm. See Grimes, *supra* note 154, at 273–74; Silverman, *supra* note 4, at 4B.

²⁹⁷ Cf. *Eastman Kodak*, 504 U.S. at 473, 476–78. One commentator has expressed similar sentiments: "The hundreds of millions of consumers who are not AT&T Wireless customers could not make use of the iPhone unless they become AT&T customers. The question is, why? Why can't you just buy a cell phone and use it on any network, like a normal phone?" Wu, *supra* note 21, at 395.

²⁹⁸ See *Jefferson Parish*, 466 U.S. at 14; *Fortner I*, 394 U.S. at 508–09; *Times-Picayune Publ'g Co. v. United States*, 345 U.S. 594, 605 (1953).

²⁹⁹ See *Jefferson Parish*, 466 U.S. at 14; *Fortner I*, 394 U.S. at 508; *id.* at 513 (White, J. dissenting).

³⁰⁰ AT&T may have had to make investments in its services to get the iPhone contract, but those improvements have not translated into an improved consumer experience. See Seitz, *supra* note 73. Customers still profess their hatred for the company, and business analysts acknowledge that users face dropped calls, poor sound quality, and slow Internet access. See *id.*; see also van Beijnum, *supra* note 72 (describing AT&T's attempted improvements); Posting of TEX to I Hate My iPhone, *supra* note 76 (blogger professing hatred). Furthermore, it seems likely that AT&T won the iPhone contract not because of its superior service, but because it was willing to pay more in the form of a generous revenue sharing agreement and relinquishing control, two factors that do not provide consumers with any direct benefit. See Vogelstein, *supra* note 27, at 122. Unless Apple pressures AT&T, AT&T has less incentive to improve its service because it is already guaranteed to be the sole service provider of the iPhone for the next five years. See *Jefferson Parish*, 466 U.S. at 14; Vogelstein, *supra* note 27, at 122 (referring to the five-year exclusive dealing contract between Apple and AT&T); cf. Wu, *supra* note 21, at 395–98 (explaining how the regulations that allowed consumers to use whatever device they wanted with their land lines yielded

other carriers had the opportunity to bid for the deal with Apple, consumers have a valid argument that competition in the cellular service market would best be served if firms had to compete for iPhone purchasers directly.³⁰¹ That type of beneficial competition would arise if consumers could unlock their iPhones.³⁰²

D. Fourth Condition: Apple and AT&T's Tying Arrangement Affects a Substantial Amount of Commerce

Perhaps the easiest of the four conditions to prove, this condition requires consumers to prove that the iPhone tying arrangement affects a substantial amount of commerce.³⁰³ As the Court explained in *Jefferson Parish*, if the tying arrangement only forced a single consumer to purchase the tied item, the resulting impact on competition would not be sufficient to warrant the concern of antitrust law.³⁰⁴ This is not a problem in the case of the iPhone, where every purchaser agrees to the service contract with AT&T.³⁰⁵ Furthermore, as of 2007's third quarter, the tying arrangement has affected 1.4 million consumers, a figure that corresponds with a \$10.9 billion sales boost for AT&T, who now has the most wireless subscribers among all U.S. phone companies.³⁰⁶ A court would have a hard time holding that the foreclosure of more than 1.4 million consumers from the cellular service market was not substantial, particularly in light of the tying arrangement's anticompetitive effects.³⁰⁷

E. Normative Implications of the Apple-AT&T Tying Arrangement

The Apple-AT&T tying arrangement reveals a major problem in technological industries generally and the cell phone industry specifi-

both expected and unexpected innovations in the telecommunications equipment market). This result is what the U.S. Supreme Court feared would happen if a tying arrangement was allowed to "insulate" the tied product from the competitive stresses of the open market. See *Jefferson Parish*, 466 U.S. at 13-14; *Times-Picayune*, 345 U.S. at 605.

³⁰¹ See *Jefferson Parish*, 466 U.S. at 13-14; *Fortner I*, 394 U.S. at 508; *id.* at 512 (White, J., dissenting); *Times-Picayune*, 345 U.S. at 605.

³⁰² See *Jefferson Parish*, 466 U.S. at 13-14; *Fortner I*, 394 U.S. at 508; *id.* at 512 (White, J., dissenting); *Times-Picayune*, 345 U.S. at 605; *N. Pac. Ry.*, 356 U.S. at 4; Brodley, *supra* note 150, at 1023 ("[A]ntitrust policy enunciates a distinct economic objective—a blending of efficiency and consumer welfare—to be achieved by a particular social instrumentality—interfirm rivalry.").

³⁰³ See *Ill. Tool Works*, 547 U.S. at 39; *N. Pac. Ry.*, 356 U.S. at 11; *Int'l Salt Co. v. United States*, 332 U.S. 392, 396 (1947); *supra* notes 205-213 and accompanying text.

³⁰⁴ *Jefferson Parish*, 466 U.S. at 16.

³⁰⁵ Smith Complaint, *supra* note 12, ¶¶ 3-4, 28, at 2, 6; Netanel, *supra* note 17, at 79-80.

³⁰⁶ See Graham, *iPhone's Future*, *supra* note 68; Krause, *AT&T Growth*, *supra* note 49.

³⁰⁷ See *Fortner I*, 394 U.S. at 501-02.

cally.³⁰⁸ As producers like Apple improve their ability to restrict the use of their products through software locks and license agreements, innovative and potentially beneficial products facilitate anti-competitive behavior, ultimately harming consumers.³⁰⁹ The iPhone may have answered consumer demand for cell phones in a revolutionary way, but it simultaneously hurt consumers by impeding competition in the wireless service market.³¹⁰

On an even more fundamental level, the iPhone represents an exploitation of the common consumer.³¹¹ The glitz of the iPhone and the allure of the Apple brand overshadowed the deficiencies of AT&T's service.³¹² This does not mean that iPhone purchasers were dim-witted, that Apple tricked consumers, or that the law needs to overprotect ignorant consumers.³¹³ It does mean, however, that Apple and AT&T interfered with consumers' decision making,³¹⁴ prevented them from enjoying the full utility of the iPhone,³¹⁵ and deprived them of the benefits of increased competition in the wireless market.³¹⁶

To be certain, the wireless market might ultimately reflect the decisions of the few consumers who carefully weighed the downside of AT&T's service against the upside of the iPhone, thus eliminating the need for judicial intervention.³¹⁷ Yet, it does not follow that this market response will occur quickly enough to maximize competition in the cell

³⁰⁸ See *Lexmark*, 387 F.3d at 551-52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1201; Burk, *Anticircumvention*, *supra* note 103, at 1110; Grimes, *supra* note 154, at 266-67.

³⁰⁹ See *Lexmark*, 387 F.3d at 551-52 (Merritt, J., concurring); *Chamberlain*, 381 F.3d at 1201; Grimes, *supra* note 154, at 266-67; Netanel, *supra* note 17, at 77-80; cf. *Eastman Kodak*, 504 U.S. at 473, 476-78.

³¹⁰ See *Eastman Kodak*, 504 U.S. at 477-78; *Jefferson Parish*, 466 U.S. at 11-14; *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Brodley, *supra* note 150, at 1032-35; Lande, *supra* note 159, at 93-96; Meese, *supra* note 146, at 16; *supra* notes 198-204, 298-302 and accompanying text.

³¹¹ See *Jefferson Parish*, 466 U.S. at 12; *Fortner I*, 394 U.S. at 512 (White, J., dissenting); Grimes, *supra* note 154, at 272-75; Silverman, *supra* note 4.

³¹² See Peters, *supra* note 1; Samavati, *supra* note 72; Vogelstein, *supra* note 27, at 125; *supra* notes 60-79 and accompanying text.

³¹³ See Grimes, *supra* note 154, at 273-74; Netanel, *supra* note 17, at 79-80.

³¹⁴ See Grimes, *supra* note 154, at 273-74; Netanel, *supra* note 17, at 79-80; *supra* notes 276-280, 293-298 and accompanying text.

³¹⁵ See Grossman, *supra* note 60; Mossberg, *BlackJack*, *supra* note 60; Quinn, *supra* note 4; Suzukamo, *supra* note 4; Vogelstein, *supra* note 27, at 122, 125; *supra* notes 72-79 and accompanying text.

³¹⁶ See *Jefferson Parish*, 466 U.S. at 14; *Fortner I*, 394 U.S. at 508; *id.* at 513 (White, J. dissenting); Krause, *AT&T Growth*, *supra* note 49; *supra* notes 298-302 and accompanying text.

³¹⁷ See *Jefferson Parish*, 466 U.S. at 35-36 (O'Connor, J., concurring); Meese, *supra* note 146, at 23-24; Paredes, *supra* note 183, at 299.

phone industry in the interim.³¹⁸ Untying the Apple-AT&T relationship, however, would facilitate competition in the service market by giving consumers the freedom to choose the service that best meets their demand *after* their initial purchase decision.³¹⁹ With this increased flexibility, the cellular service market could respond faster to changing consumer preferences, ultimately reducing the harmful impact created by the informational deficiencies that exist at the time of purchase.³²⁰ Because antitrust laws are meant to increase competition and enhance the quality of consumer demand, it makes good policy sense for a court to condemn business models that prey on consumers' lack of information and lock them into undesirable situations.³²¹

CONCLUSION

The iPhone tying arrangement demonstrates that the Sixth Circuit in *Lexmark International, Inc. v. Static Control Components, Inc.* and the Federal Circuit in *Chamberlain Group, Inc. v. Skylink Technologies, Inc.* were correct in their fears that producers can use technological locks to achieve anticompetitive purposes. More importantly, the iPhone tying arrangement shows how consumers (and courts) should not look toward copyright law to free themselves from these locks. Although Congress may have passed the anticircumvention provisions of the Digital Millennium Copyright Act for the benefit of producers *and* consumers, that law cannot operate as an offensive weapon for consumers to use against the unfair business models employed by Apple and AT&T with regard to the iPhone. Consumers can, of course, alter the products they purchase to work the way they desire, but, in the digital world, the seller can always fight back, much like Apple did when the iPhone was unlocked. Hence, arguing that the seller has used an anticircumvention lock to protect an illegal tying arrangement is the best avenue for consumers to challenge the iPhone-AT&T arrangement and similar schemes.

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³¹⁸ See *Eastman Kodak*, 504 U.S. at 473, 476–78; *Jefferson Parish*, 466 U.S. at 14; *Fortner I*, 394 U.S. at 508–09; *Times-Picayune*, 345 U.S. at 605; Brodley, *supra* note 150, at 1023; Wu, *supra* note 21, at 395; *supra* notes 203, 292–297 and accompanying text.

³¹⁹ See *Eastman Kodak*, 504 U.S. at 473, 476–78; Grimes, *supra* note 154, at 273–74; Netanel, *supra* note 17, at 79–80; *supra* notes 292–297 and accompanying text.

³²⁰ See *Eastman Kodak*, 504 U.S. at 473, 476–78; Grimes, *supra* note 154, at 273–74.

³²¹ See *Eastman Kodak*, 504 U.S. at 473, 476–78; Brodley, *supra* note 150, at 1023; Grimes, *supra* note 154, at 273–74; Lande, *supra* note 158 at 93–96; *supra* notes 152–163, 288–303 and accompanying text.